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Cognition, language and culture: foundations for aboriginal schooling

Alan Thomas Twomey
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COGNITION, LANGUAGE AND CULTURE:
FOUNDATIONS FOR ABORIGINAL SCHOOLING

VOLUME I

A thesis submitted in fulfilment of the
requirements for the award of the degree of

DOCTOR OF PHILOSOPHY

from

THE UNIVERSITY OF WOLLONGONG

by

ALAN THOMAS TWOMEY, B.Sc. (Applied Psychology)

DEPARTMENT OF EDUCATION

1981

This thesis incorporates original research conducted by the author and includes no material accepted for any other academic award in any university. To the best of my knowledge, it does not contain any material authored by another person, except when duly referenced.

Alan T. Twomey

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A NOTE ON LANGUAGE TERMS

In an attempt to avoid cumbersome phraseology and because of the absence in Standard English of appropriate and efficient 'non-sexist' terminology, pronouns such as 'his', or 'he' were used, where appropriate, to refer to individuals of either sex. The asexual meaning of the terms should be clear from the context in which they are presented. Apologies to the feminists.

In view of the current importance in Aboriginal education of issues concerning the nature and function of language, and of the need to distinguish between language forms and their use in cognitive tasks, the concept of language, for the most part, is treated separately from the broader concept of cognition throughout this inquiry.

In the absence of nominal terms for mixed-blood Aborigines (such as Australs or Eurabs), similar to those used for mixed bloods in Latin America (Mestizo or Mulatto), the term 'Aborigines' is used to describe both mixed bloods and full bloods, except when there is a need to differentiate between both groups.

ABSTRACT

The aim of this inquiry is to shed light on the nature of influences impeding the performance of Aboriginal children at school, and especially at tasks requiring number and language abilities. In recognition of the intricacy and interrelatedness of these influences, and of the inability of unidimensional perspectives of single disciplines to encompass fully this complexity, elements of an eclectic approach that draw, in particular, from the disciplines of education, history, anthropology, sociology, psychology and linguistics were adopted in the inquiry.

The study includes both theoretical and empirical research components and has been divided into two sections. In Part A, theoretical issues and pertinent research concerned with Aboriginal schooling, cognition, language and culture are examined in detail, with a view, in particular, to shedding light on questions of deficit or difference as they relate to Aborigines. A major conclusion from these discussions is the need for policy-makers, educators and others to avoid simplistic caricatures of complex psychological and socio-cultural interactions, by adopting less ethnocentric or 'disciplino-centric' interpretations of observed behaviour.

A study of sociocultural, psychological and educational characteristics of coastal Aborigines in southern New South Wales is presented in Part B. The research contains two strands - one socio-historical, and the other quantitative. The sociohistorical strand comprises an investigation and an interpretation of the history of interactions between Aborigines and Whites in this region. Based on evidence available from both primary and secondary sources, it is

argued that complex 'assimilatory' and 'accommodatory' sociocultural mechanisms with psychological (and ultimately, biological) roots, have been governing the nature and rate of culture change experienced by both groups, and that these processes have led to the emergence of a local Aboriginal variant of what Oscar Lewis calls the 'culture of poverty'.

In the quantitative strand, all available Aboriginal children and a comparison group of White children, aged not more than ten years and six months, and attending primary school at each of the three main towns in the district, were given a test battery designed to assess classificatory and language performance and locus-of-control orientation. Their school attendance records and teacher assessments of their academic performance and application also were obtained. In addition, at least one parent of most of the children tested was interviewed and asked to answer an especially-devised quantifiable questionnaire based on the concept of a subculture of poverty.

The thesis concludes with the argument that the weight of empirical and theoretical evidence gathered or reviewed in the inquiry suggests that cognitive and language differences between Aborigines and Whites primarily reflect variations between them in the 'culturalisation' (as distinct from socialisation) processes to which they are exposed. It is further concluded that unless complementary 'cultural accommodations' by both sociocultural groups are promoted actively, the cognitive and language differences, and hence school performance differences, between both groups will persist. Finally, it is suggested that there is a need for educators, researchers and government policy-makers to go beyond the conceptual constraints of deficit-difference controversies and to concentrate instead on concepts

such as 'functional outcomes', or 'adaptational options' as part of a programme directed towards identifying and implementing means for facilitating reciprocal cultural accommodations by both groups.

PART A

ABORIGINAL SCHOOLING, COGNITION, LANGUAGE AND CULTURE:

THEORETICAL CONSIDERATIONS AND RELEVANT RESEARCH

FOREWORD TO PART A

As is the case with minority groups elsewhere in the world, controversies related to the education of Aboriginal Australians abound. In the author's view, many of these controversies reflect the conceptual constraints of an over-dependence on individual disciplinary perspectives. The purpose of Part A (Chapters 1 to 4) of this inquiry, therefore, is to elucidate some of these controversial issues by drawing on contributions offered by several disciplines.

Chapter 1 introduces the social and educational issues to which this inquiry is addressed by providing an overview of the historical circumstance, contemporary social situation, and educational status of Aborigines in Australian society. It then identifies the nature of opposing 'deficit' and 'difference' interpretations of their academic failure and establishes the rationale and limitations of this inquiry.

Issues and research findings concerning the nature of Aboriginal cognition are examined from an historical perspective in Chapter 2. The Chapter highlights the inadequacy and ethnocentricity of early concepts and gauges of intellect, stresses the importance of environmental influences on both the development and expression of abilities, and argues in favour of the use of more flexible recent conceptual frameworks, such as the model of 'Potential, Competence and Performance' described by Nurcombe (1976) as guides for the formulation and interpretation of intercultural studies of cognition.

Language forms the basis of the discussion in Chapter 3. It has emerged as an especially controversial issue in the education of minority groups in recent years. Hence, it is treated in considerable

detail. An important emphasis of the discussion is the need for psycholinguistic researchers to achieve more comprehensive understandings of linguistic and sociolinguistic influences on test performance, so as to improve the adequacy of their interpretations of the data they obtain. Thus, in an attempt to shed light on issues relating to the linguistic status and cognitive utility of non-standard dialects of English in general, and on the nature of Aboriginal English and Aboriginal psycholinguistic abilities in particular, the Chapter includes an examination of theoretical issues concerning the nature, function and structure of language, its acquisition and the relationship between language and thought, prior to a review of research with Aborigines.

The question of 'deficit' is approached from an anthropological-sociological perspective in Chapter 4. Specifically, the nature of the sociocultural background of Aborigines is explored from the viewpoint of Oscar Lewis' (1966) concept of a culture of poverty. While not losing sight of the unique historical experience and heterogeneity of Aborigines, the Chapter points to sociocultural similarities between them and similarly dispossessed indigenous groups in other capitalist ex-colonies. In particular, the discussion highlights the need to understand the subcultural characteristics of Aborigines in terms both of external sociocultural pressures they experience, and of self-perpetuating coping strategies they have evolved. In conclusion, it identifies the need for a more complete understanding of the dynamics of culture change.

The contents of Chapters 5 to 9 are described at the commencement of Part B of this inquiry (following Chapter 4).

CHAPTER 1

ISSUES IN ABORIGINAL EDUCATION

1.1 INTRODUCTION

Among the many social, economic and political problems left in the wake of receding colonial empires, the plight of conquered indigenous peoples whose lands have been occupied by other more numerous or powerful groups stands out. Along with other minorities, many of whom, similarly, have been uprooted forcefully from their original homelands, these peoples often continue to linger in a state of deprivation and demoralisation, in sad contrast to the affluent majorities in modern capitalist societies. Australia's indigenes are no exception. Characterised by low levels of educational attainment and limited economic opportunities, many Aborigines are encapsulated in a cycle of dependence and poverty.

Improvement in their levels of formal education is one means of contributing to the breakdown of this cycle. Fundamental numeracy and literacy skills are often poorly developed and need to be improved if Aborigines are to have the options of participating equitably in, or utilising to their advantage, the political, social, and economic institutions of the larger society, or of developing potent institutions of their own. Educators charged with the responsibility of designing appropriate and effective programmes directed towards providing these skills require accurate and comprehensive information about the nature and variety of influences that facilitate or hinder their development in Aboriginal children if these programmes are to be successful.

Past research has highlighted the importance of environmental influences on the development of cognitive and language structures, as well as of motivational orientations that are conducive to the

acquisition of such skills. In particular, a close relationship has been demonstrated between the development of these underlying psychological characteristics in Aboriginal children and the degree of contact their families have with the mainstream of Australian society. The purpose of the research reported herein is to expand on this existing knowledge.

The present Chapter is designed to provide perspective for this research. Commencing with a brief account of the historical circumstances that underlie many of the current difficulties experienced by Aborigines (1.2), it proceeds to highlight the extent and nature of their low levels of formal educational attainments (1.3). Various models that have been put forward to explain this failure are noted (1.4) and their implications for Aboriginal education are discussed (1.5), before the orientation and limitations of the research reported herein (1.6) are described.

1.2 THE HISTORICAL CIRCUMSTANCE⁽¹⁾

Australia's first immigrants arrived via the Indonesian Archipelago at least 30,000 years ago, and perhaps as long as 50,000 years ago (Mulvaney, 1975). In comparative isolation from other cultural groups, the descendants of these pioneers and possibly those of later arrivals (Birdsell, 1949, 1967) successfully responded to the ecological pressure they faced by developing a semi-nomadic, hunting

(1) See Chapter 6 for further discussion of this topic as it relates to Aborigines on the South Coast of New South Wales.

and gathering lifestyle that preserved a "delicate balance between resources available to them and the preservation of the race" (Stevens, 1970, p.364). The immediate and often marginal nature of such an existence meant that most able members of a community participated in a continuous search for food. When it was scarce or the water supply was insufficient, they were forced to move on and to seek it in other parts of their own or their neighbour's ancestral tracts of land. Few material possessions and mutual, though regulated, sharing of available resources consequently developed as advantageous cultural characteristics that assisted this system of survival.

1.2.1 Traditional Life:

By the time Cook 'discovered' Australia's east coast in 1770, there were approximately 300,000 Aborigines inhabiting the continent. They were divided into about five hundred linguistically distinct tribal groups, each culturally and psychologically attuned to its particular environmental surroundings (Tindale, 1974; Elkin, 1974). Complex belief systems, reflecting the Aborigines' dependence on, and close association with the natural world, traced an essential unity between man and nature to the happenings of the 'Dreamtime'. These beliefs were manifest in various myths and rituals and were reflected both in social organisation and practices and in the close attachment of Aboriginal groups to their tribal lands and sacred sites. Some goods were traded over long distances and some groups had contact with non-Aborigines, but most knew only of neighbouring groups among whom wives were found, goods were exchanged, ceremonies and feasts were shared or 'war' was waged. Knowledge and skills that ensured both

group cohesion and survival, and individual physical and psychological well-being, were thus passed on, with little variation from one generation to the next.

1.2.2 Dispossession, Detribalisation and Demoralisation:

But a new wave of immigration, commencing with the establishment of a settlement at Botany Bay in 1788 by Captain Phillip, was to disrupt dramatically this long-standing pattern. It was to have disastrous consequences for many of the original inhabitants. Convinced of their moral, cultural, and intellectual superiority, and motivated by the beliefs that "the Christian settler was a civilising force and that economic exploitation was the basis for civilisation" (Rowley, 1970a, p.11), these new arrivals, the European colonists, rapidly, if at times unwittingly, brought about the destruction of traditional Aboriginal society in south-eastern and south-western Australia. Conflict over land use ended with its control passing into the hands of the Europeans who, with the introduction of new plants and animals, established a new economic order. It was not long before "the finely balanced indigene ecology on which the people depended not only for their sustenance and continuity, but also for their spiritual inspiration, was shattered" (Stevens, 1970, p.367).

The disruption of traditional survival patterns, the desecration of sacred sites, murder, mass killings, introduced diseases and the inefficiency, ignorance and neglect of government officials meant "that as the frontier moved beyond a particular area, what was left were not conquered tribes but dispirited remnants" of a decimated population (Rowley, 1970a, p.23). In addition, "the conservative and retrospectively biased culture of the Aborigines considerably impeded

their adjustment to the new situation and consequently their ability to survive in the face of the new forces" (Stevens, 1970, p.367). Resistance in the form of sporadic, unorganised 'guerilla' attacks did occur, but for the most part were ineffective against the organisational and technological superiority of the Europeans. Progressively, and perhaps, inevitably, the 'civilising mission' of the Europeans left in its wake an Aboriginal population suffering from malnutrition, disease, dispossession, deprivation, discrimination, demoralisation, and alcoholism.

Not all the newcomers were callous or brutal. Attempts were made to soften the impact of European settlement and to facilitate the adjustment of Aborigines to their new circumstances. Commencing with the establishment by Governor Macquarie of a special school for Aborigines at Parramatta in 1815, government officials and missionaries have attempted to 'civilise' Aborigines through 'education' and religious instruction (Clark, 1969). But finding themselves in conflict with the influences of traditional Aboriginal teachings, they attempted to segregate Aboriginal pupils from their families, by placing them in residential schools. Not surprisingly, the pupils lost interest after a short time and wanted to return home "nothing much enlightened by the smattering of education and Christian dogma they had acquired" (Foxcroft, quoted in Felton, 1969, p.5).

Missionaries also played an important role in the development of protectionist policies by state and, later, federal governments. Restrictive, segregationist, and viewed by many as merely attempting to soften the Aborigines' 'inevitable' path to extinction, along with other 'inferior' species, these policies also were later criticised for failing not only "to ensure the survival" of groups of full-blood

Aborigines, but also "to protect them from harsh treatment" (Elkin, 1974, p.367). Nevertheless, it was the period of their implementation which saw the emergence of part-Aboriginal groups, who, far from being absorbed into the majority population, as most predicted, have come to constitute the fastest-growing segment of Australia's population (Rowley, 1970b).

1.2.3 The Contemporary Situation:

Today there are about 120,000 Australians who are recognised as, or identify themselves as Aborigines,⁽¹⁾ with perhaps a similar number of partial Aboriginal descent, who neither identify with, nor are recognised as Aborigines (Kearney and McElwain, 1976). The problems and circumstances of the many groups comprising the former population, the pressures they face, their responses to these pressures, and the changes they are undergoing, vary greatly. Many who live in northern Australia and in some desert areas of Central and Western Australia are traditionally-oriented tribal full-bloods; others, usually of mixed racial origin,⁽²⁾ live as rural fringe dwellers or as urban poor; still others have lifestyles that are virtually indistinguishable from those of other Australians of similar socioeconomic status. Clearly they form an extremely heterogeneous population. Kearney and McElwain (1976) have thus cautioned that specific information concerning a particular group needs to be qualified by temporal and geographic considerations.

(1) This is currently the criterion used by the Australian Bureau of Statistics to define Aborigines, and will be the one used in this discussion.

(2) Admixtures include components from southern and eastern Asia and various islands in Melanesia and Polynesia, as well as from European Australia.

In general, however, almost two hundred years after European settlement began, most Aborigines are still suffering both psychologically and physically from its traumatic effects.⁽¹⁾ Despite belated but substantial recent increases in government expenditure on Aboriginal welfare,⁽²⁾ the majority of Aborigines still experience a life of poverty, disease, discrimination, alienation and little in the way of formal education. Housing, although improving, is generally poor. Increasing numbers live in urban 'ghettos' in old, dilapidated houses. Many others live in humpies made of corrugated iron sheets, cardboard or bark on river banks, reserves or the outskirts of country towns. Compared to the national average on health indices, they have a higher infant mortality rate, lower life expectancy, greater frequency of disease and malnutrition and a higher incidence of alcoholism. Apathy, withdrawal and depression are common and reflect a kind of 'psychic numbing' that has its origins in the historical forces referred to above, which have produced inconsistencies between competing systems of social reinforcement to which Aborigines are exposed, thus inhibiting their development of a clear, positive sense of identity (Berry, 1970; Dawson, 1969).

1.3 EDUCATIONAL STATUS

Formal education so far has failed to contribute significantly towards alleviating the situation, and falls far short of aims stated on behalf of the Aboriginal community by the Aboriginal Consultative Group (1975) in a report to the Schools Commission:

(1) See Chapter 4 (4.4) for more detailed discussion of the socio-cultural characteristics of Aborigines in the light of Oscar Lewis' concept of a 'culture of poverty'.

(2) From about 1976 onwards, however, real expenditure has begun to decline (Department of Aboriginal Affairs, 1978, 1979, 1980).

We see education as the most important strategy for achieving realistic self-determination for the Aboriginal people of Australia ... [and also] ... as an instrument for creating an informed community with intellectual and technological skills in harmony with our own cultural values and identity (p.3),

and further, that:

Aboriginal people should be involved ... and have some realistic control of this process (prefacing letter).

1.3.1 Levels of Attainment:

By virtually any index of formal education, be it age for grade, standard of academic performance, number of years of schooling, number of students enrolled in tertiary institutions, or level of adult literacy, Aborigines have fared poorly over recent years when compared to state or national averages (Watts, 1969). McGinness (1969) points out that education for Aborigines in Queensland in 1967 had not advanced much beyond what was provided by the early missionaries in Victoria over a century earlier. She notes that many Aborigines received no education at that time and still used a thumbprint as a signature. In many areas also, Aboriginal children were segregated in dormitories away from their families, religious instruction formed a large component of their education, and for "ninety nine in every hundred children, the maximum standard regarded [as] adequate ... was that of a nine-year-old child" (McGinness, 1969, p.52)

Although regional variations favouring New South Wales and Victoria are considerable, a similar pattern of poor educational attainment for the Aboriginal population has been evidenced nationwide for some time. Basing his analysis on the 1966 Census, Broom (1970), for example, reports that, of the male Aboriginal population, 34.5% had no education (ranging from 60.6% in the Northern Territory to 3.5%

in Victoria), while only 3.3% had an Intermediate level of education or higher (ranging from 0.8% in the Northern Territory to 8.2% in New South Wales). Similarly, Tatz (1969) notes that only 2% of the Aboriginal population (ranging from 0.03% in the Northern Territory to 7.0% in Victoria), compared to 6.2% of the total Australian population, were in secondary school, despite the fact that the proportion of the Aboriginal population of school age is considerably greater than for the total population.

Some improvement had occurred by the time of the 1971 Census, but, with the exception of Victoria, it tended to be marginal. Watts (1976), for example, notes that in 1971, 24.7% of the Aboriginal population (ranging from 49.8% in the Northern Territory to 1.9% in Victoria) had not attended school, compared with only 0.8% of the total Australian population; 26.2% had a secondary level of education (varying from 4.7% in the Northern Territory to 63.8% in Victoria), in contrast to 71.5% for the total population; and that only 3.5% of the Aboriginal population (0.4% in the Northern Territory to 20.1% in Victoria) had the equivalent of a fourth-form or higher level of education, compared with 29.6% of the total population. This latter figure also was reflected in the finding that, of all Aboriginal children who enter secondary school, only 12% (2% in Western Australia to 43% in Victoria) remain by fourth form or its equivalent, in contrast to 60% of all Australian children.

As a first step towards improving this situation, educators need to know more precisely the nature of the poor school performance of Aboriginal children, as well as the reasons for it.

1.3.2 Educational Research:

For a long period, detailed information was difficult to obtain. Until the Referendum of 1967, the Aboriginal population could not officially be tabulated and analysed as part of the Australian Census. Estimates that were available were often unreliable, invalid, or unenlightening (Tatz, 1969; Rowley, 1970a). In addition, the assimilationist policies of the federal and state governments discouraged any practice that even remotely hinted at discriminatory treatment by government agencies other than those directly concerned with Aboriginal welfare. In the schools, all children were to be treated similarly, and separate statistics on Aboriginal and White children were not kept officially. Differences were considered to reflect individual, rather than group, variations. As a result, the extent and nature of the poor academic attainments of Aboriginal children remained hidden, thus inhibiting the implementation of effective remedial measures (Tatz, 1969).

From the time of the Referendum in 1967, however, social, economic and political changes, both within Australia and overseas, have led to an expanding awareness amongst Australians of the nature and extent of problems experienced by disadvantaged groups, and especially by Aborigines. The militant anti-colonial rhetoric of the leaders of newly-independent nations, race riots in the United States of America, and the increasingly loud voice of Aboriginal spokesmen and supporters have contributed to this process.⁽¹⁾ Progressively, the need for more comprehensive and precise information about Aboriginal groups began to be felt. In the educational sphere, this need was expressed by a series of conferences exploring the educational problems

(1) Further discussion of this process appears in Chapter 4 (4.1) and Chapter 6 (6.10).

of Aboriginal children (Dunn and Tatz, 1969; Roper, 1969; Coppell, 1974, 1976; N.S.W. Department of Education, 1974, 1976) and by increased government expenditure on Aboriginal education (Schools Commission Report, 1975-1976).

But even as early as 1964, the New South Wales Teachers' Federation (1969) had conducted a survey of Aboriginal pupils in New South Wales secondary schools, which pointed to the extent and nature of their poor performance. It was found that only 0.2% of Aboriginal pupils attending these schools were in fifth grade, compared with 7% of White pupils; only 9% proceeded beyond second year, compared with 52% of other pupils; and 58% were rated as 'slow learners'. A similar survey they conducted in 1971 found some improvement, but the performance of Aboriginal pupils was still far below that of other pupils. Two percent (12/584) were attempting the Higher School Certificate, 9.27% went to fourth form, and 52% were still grouped as slow learners (Duncan, 1974).

1.3.3 Specific Difficulties:

Fundamental numeracy and literacy skills are usually the ones in which Aboriginal children are poorest. Milliken (1969), for example, gave fifty-three Darwin Aboriginal children, aged eleven to twelve years, and with at least four years of schooling, the A.C.E.R. Junior A Test, which was designed to cater for children of eight years or older in the general population. Only twelve (22.6%) performed well enough for their results to be analysed, and of their performance, Milliken writes: "Arithmetic items generally were poorly handled [while] Word Analogy, Order Sequence, and Logical Sequence items were reasonably handled" (1969, p.224). A longitudinal study by

Keats (1973) compared the performance of Aboriginal and White pupils on Stradbroke Island in 1959 and 1965. She found that, although the performance of Aboriginal children remained inferior, the gap in performance between both groups on Mathematics and English tests had narrowed after an improvement had occurred in the living conditions of the Aboriginal children. She also noted that performances on a Social Studies test, and on all but one of the subtests of the Queensland Test,⁽¹⁾ were virtually equivalent for both races in 1965. Similarly, based on the results of an unpublished survey conducted under the auspices of the Victorian Teachers' Union and the Victorian Employers' Federation, Felton (1969) notes that: "In terms of academic performance in the basic subjects, Aboriginal pupils are shown to perform at the average level in art, handwork and social studies, but below average in mathematics. Performances in spelling, reading and composition were mostly average or below" (p.9). Aboriginal children also were often one or more years educationally retarded and hence older than average, and had less frequent attendance.

As late as 1975, a survey of Aboriginal children in Western Australian schools, conducted for the Education Department of Western Australia, found similar trends. Based on teacher ratings, it found that, among Aboriginal pupils in primary schools, 60-66% performed below to well-below average in reading, oral and writing skills, and mathematics; 50-53% were rated similarly for science and social science; and one third had repeated at least one grade. Performance in art, crafts, and music was rated as average, while in sport it was rated as superior. The report concludes that "Aboriginal achievement

(1) The Queensland Test is discussed more fully in Chapter 2.

is lowest in the areas of basic skills (in reading, oral and written language use, and in mathematics) - an assessment which defines the essential problem of Aboriginal education" (Tannock and Punch, 1975, p.24). Similar findings for Northern Territory Aborigines have been reported by Bourke and Parkin (1977).

Thus, although regional variations are considerable, the picture that emerges of Aboriginal pupils generally, when compared with national or state averages, is that they attend school less often (when not at boarding school), progress more slowly, congregate in the lower streams, demonstrate lower levels of language and number abilities, and leave school at an earlier age. Clearly then, if the aims of the Aboriginal Consultative group noted previously are to be met, and if Aborigines are to be able to participate more equitably and effectively in decision-making concerning their future, substantial improvements in their levels of formal education, and especially in their levels of performance on tasks requiring number and language skills, are a priority. But if educators are to devise programmes that will be optimally effective in overcoming educational disparities between Aboriginal and White pupils, they will require more specific and comprehensive information about the nature of the causes of the poor performance of the Aboriginal children. What more precisely then, are the antecedents of their poor school performance?

1.4 MODELS OF FAILURE

The issues raised by this question are complex and inter-related and many of them have yet to be resolved. They include the need to re-examine the assumptions, concepts and tools that guide our understanding and assessment of the cognitive and language competencies that underlie school performance; the need for a more complete understanding and awareness of emotional, motivational and sociocultural

influences on the development of these competencies; the need to know more about the direct effects and relative contributions of these psychological and sociocultural characteristics to the actual school performance⁽¹⁾ of culturally different groups; and the need for a closer analysis of the nature, function, dynamics, and curricula of our schooling system. The extensive task of examining all these issues in depth is beyond the scope of this inquiry, but major models put forward to explain the poor performance of Aboriginal children at school will be outlined to provide perspective for the primary focus of the research reported herein.

From the many explanations that have been proposed, two main themes can be identified. One has as its focus the family backgrounds of Aboriginal children which are characterised as being inadequate either for the nurturance of specific academic skills, or for the development of underlying competencies and motivations that enable such skills to emerge. The second theme centres on the role of the schools. They are depicted as providing inadequate and often hostile environments for Aboriginal children that inhibit, rather than facilitate, their academic performance. Both viewpoints contain elements that overlap and can, perhaps, best be conceived as differing focal points in a mosaic of interlocking factors that, together, may act as causative agents of the poor academic progress of Aboriginal children. Nevertheless, the distinction between both explanations is important because of their differing implications for social and educational policies and practices. This distinction also serves as a useful heuristic device and will be used as the basis for a more detailed examination of competing models of failure that have been put forward.

(1) The distinction between competence and performance is discussed in Chapter 2 (2.6.2) and Chapter 3 (3.4.3).

1.4.1 Family Background: The Deficit Model

Although having various and sometimes competing manifestations, the first viewpoint referred to above has, as its central core, the claim that the poor performance of Aboriginal children at school can be attributed primarily to factors associated with their family background. In one form or another, elements considered essential to the development and maintenance of intellectual skills associated with school performance are thought to be missing. These 'deficiencies' may have either biological or sociocultural roots. They include the child's genetic constitution, nutritional fortification, environmental stimulation and motivational support, each of which is thought to act either independently or in combination to limit his academic attainments. Many Aboriginal children are thus characterised as being genetically, physiologically, experientially or culturally disadvantaged, and hence neither cognitively nor affectively ready for school upon entering, and likely to experience an accumulating deficit in performance thereafter.

Many controversies surround these propositions, however, and the heterogeneity of the Aboriginal population, noted previously, means that generalisations should be treated cautiously.

1.4.1.1 Biological Determinants:

The relative influence of genetic or environmental influences in determining racial differences in performance on intellectual tasks, for example, has been revived as a controversial issue following the publication of works by Eysenck (1971) and Jensen (1969, 1973). They attribute most of the twelve to fifteen point IQ variation between Black and White Americans in their average performance on tests of

intelligence, to differences in the genetic makeup of both groups, which favour the White population. Similar arguments have been put forward in relation to Aborigines. Claims that they would not profit as much as Europeans from formal schooling because of innate incapacities that limited their potential intellectual achievements, have a long history (Galton, 1869; Porteus, 1965; de Lemos, 1969a, 1969b), and have been influential on the formulation of educational and social policies affecting Aborigines until recent times (Duncan, 1969). Such conclusions are highly debatable, however, and recent trends in both theory and the interpretation of research findings emphasise the importance of environmental influences (McElwain, 1969; de Lacey, 1974; Seagrim and Lendon, 1976).⁽¹⁾

Environmental influences on school performance include biological as well as sociocultural variables. Increasing evidence has pointed to the destructive and permanent effects of malnutrition on nervous tissue and brain growth at crucial stages of development (Vernon, 1969). Malnutrition is widespread amongst Aboriginal children and some studies have linked it with their poor academic performance (Edwards and Craddock, 1973). Aboriginal children of school age also are prone to a wide range of other illnesses⁽²⁾ which may have debilitating effects on learning and motivation, and further impede academic advancement by causing inattention, poor concentration and high rates of absenteeism (Education Welfare Group, 1976; Duncan, 1974).

(1) These issues will be discussed more fully in Chapter 2.

(2) These include "middle ear infections with resulting hearing loss, eye disease, bowel infections, respiratory diseases ... and anaemia" (Education Welfare Group, 1976, p.2).

1.4.1.2 Sociocultural Determinants:

The viewpoint which at present has the widest currency among educators and psychologists, however, emphasises the role of socio-cultural influences in retarding the academic performance of Aboriginal children. It is based on the assumption that Aboriginal and White Australians are genetically equivalent in their potential intellectual development. However, Aboriginal children are characterised as being intellectually, scholastically or motivationally disadvantaged because of the family dynamics and living conditions that characterise their home lifestyle. Together or individually, these two elements are depicted as forming a home environment that fails to provide:

(a) sufficient support for the procurement and practice of specific academic skills that are taught in the schools, (b) adequate or at least appropriate intellectual stimulation for the development of underlying cognitive structures, particularly in the early formative years, (c) adequate language skills, or (d) motivations or value orientations that are conducive to academic attainment. Each of these factors is discussed in greater detail below.

Many educators argue that schooling suffers because it is not reinforced in the home environment. Poverty, poor housing and large families are thought to coalesce to produce living conditions and parental attitudes which deprive Aboriginal children of suitable materials, incentives, opportunities or experiences that facilitate retention and development of skills and knowledge taught at school (McLaren, 1974; Guinness, 1969; N.S.W. Teachers' Federation, 1969). It is argued that there is little money for the provision of educational materials such as books, regular journals, writing equipment, or study facilities, or even to buy sufficient school clothing

(Guinness, 1969; Milliken, 1969). Overcrowding, little furniture, and poor lighting are thought to aggravate the problem by making homework difficult (N.S.W. Teachers' Federation, 1969). Minimal participation in various institutions, organisations or clubs, ranging from libraries to Boy Scouts, which often utilise, or encourage the development of, skills and knowledge associated with school learning, contribute even further to the problem, by reducing possible external sources of stimulation and reinforcement.

In addition to being illiterate or semi-literate, many Aboriginal parents also are described as failing to provide active support for the formal education of their children. They are portrayed either as being unable to assist with homework, or as having little interest in, or appreciation of, education and therefore as being unlikely to enforce homework or school attendance (Education Welfare Group, 1976; Tannock and Punch, 1975; Thompson, 1969; Duncan, 1969, 1974). Permissive child-rearing patterns, large families which make control of individual children difficult, and illness (as noted previously) also are thought to contribute to high absenteeism (Guinness, 1969; McGinness, 1969). Further disruption to schooling is said to occur because the parents, untrained for any single pursuit and lacking continuous employment, tend to move frequently to different areas, often as seasonal workers (McLaren, 1974; Duncan, 1969). Lacking appropriate models or employment prospects that require much schooling, Aboriginal children are characterised as having little incentive to remain at school (Vernon, 1969; McLaren, 1974; N.S.W. Teachers' Federation, 1969). Peer group pressure and the need to relieve financial pressures on their families also have been cited as reasons for their early leaving (Gault, 1969; Guinness, 1969). The 'anti-school' home environment often is made worse by the occurrence

of alcoholism, fighting and broken families, engendered, in part, by frustrations associated with alienation, discrimination and poverty (Aboriginal Teenager, 1969). Aboriginal children also are depicted frequently as experiencing feelings of inadequacy, inferiority and embarrassment, which tend to make them shy and withdrawn, thus impeding further their academic performance (N.S.W. Teachers' Federation, 1969).

Many psychologists have taken these and similar arguments a step further by claiming that sociocultural factors not only stifle the expression of competence in the form of academic skills, but also inhibit its development. They have proposed a theoretical model in which the multifarious adverse factors described above, together with the effects of particular child-rearing patterns (especially mother-child interactions) are described as constituting a cultural deficit. Crucial ingredients necessary for the development of competencies and motivations that underlie successful school performance are thought to be lacking (Deutsch, 1965, 1967; Vernon, 1969; Craddock, 1974). Reflecting the rise to prominence in recent years of developmental psychology, with its emphasis on the interaction between the maturing organism and its environment, this viewpoint is based on the idea that insufficient or 'inappropriate' stimulus input from the environment either retards cognitive development generally, or encourages its development in directions that are not conducive to academic attainment (Nurcombe et al., 1973). The compensatory education movement represents an attempt to overcome these 'inadequacies' by exposing pre-school children to appropriate environmental stimuli.

Language development in particular is a key issue that has received increasing attention in recent years. The poor language skills demonstrated by many Aboriginal children are thought to be both an outcome and a determiner of poor school performance (Education

Welfare Group, 1976). Controversies abound, however. Do Aboriginal children whose mother tongue is English experience the same press for language development as middle-class European Australian children? Is the language of their community simply a different but linguistically equivalent form of English to Standard English? Or is it a limited or 'debased' form that is less useful for the development and expression of complex representational thought? Should vernacular-speaking Aboriginal children be taught basic skills in their mother tongue, with English being taught as a second language? Or do such languages disadvantage their speakers by not catering for Western concepts, for example, of number, space and time? What is the relationship between language and thought? Such questions are of fundamental importance to contemporary thinking on Aboriginal education, and will be discussed further in Chapter 3.

Some authors argue also that motivational and value orientations thought to facilitate academic success are lacking in Aboriginal children. These 'missing' traits include the ability to defer gratification; the ability to persist at tasks in anticipation of future rewards; a high need for achievement; an internal locus-of-control orientation; and the desire or willingness to demonstrate superiority over others (Watts, 1969, 1974). The strengths of these motives, their orientation and the situations that invoke or suppress them, are thought to reflect child-rearing practices and available role models.

1.4.2 The Schooling System: The Difference Model:

The second major, identifiable theme linking various proposals put forward to explain the poor performance of Aboriginal children at school emphasises the detrimental effects of school-based

influences. To some extent, this viewpoint represents a reaction to what its proponents perceive as ethnocentric assumptions of superiority by those who suggest that the roots of Aboriginal academic failure can be found primarily in their family background, thereby implying that this background is in some way inferior to that of most other Australian children. Hence, the claim that Aborigines experience cultural 'deprivation' or a cultural 'deficit' with its implications of cultural and cognitive inferiority, is criticised for reflecting racist attitudes similar to those thought to underlie earlier claims that Aborigines were genetically inferior to White Australians.

In place of such arguments, a model of institutional failure is offered. According to this model, deficiencies exist, not in the culture, families, or individuals of minority populations, but in the schools which fail to cater for the cultural distinctiveness of such groups. Lower-socioeconomic minority children such as Aborigines are described as having essentially the same competencies as other children; but the expression of these competencies in the form of specific academic skills is thought to be inhibited by school environments that, critics claim, are both educationally inadequate and emotionally harmful for Aboriginal children.

The poor schooling thought to be received by these children has several dimensions. These include insensitive, untrained and misdirected teachers, inadequate methods, inferior equipment, and inappropriate curricula. Proponents of this view note that schools attended by Aboriginal children are often isolated and have a high teacher turnover. Many have poor facilities and have been classified by the Schools Commissions as disadvantaged (Education Welfare Group, 1976; Duncan, 1974). Teachers are depicted as being poorly prepared

for teaching Aboriginal pupils and as having little understanding either of Aboriginal culture or of how to relate to Aboriginal communities (Henwood, 1969; Education Welfare Group, 1976; Duncan, 1974). Few are of Aboriginal descent. Many are thought to expect their Aboriginal pupils to do poorly academically, and thereby may contribute unwittingly to the low overall performance levels of these children. In addition, classroom organisation and systems of incentive rarely take into account, or use to advantage, modes of reinforcement or organisational emphases that characterise particular Aboriginal communities (Craddock, 1973). Nor are many attempts made to build on the existing store of knowledge and skills that Aboriginal children bring with them to school. Curricular contents tend to assume middle-class backgrounds with matching aspirations and expectations and often have little relevance to the lives of Aboriginal children or their history. Consequently, feelings of failure are thought to emerge early and persist thereafter.

Supporters of this view also are critical of compensatory education programmes. Many argue that such programmes are misdirected, as they focus on the development of competencies rather than on recognising and tapping those that exist with a view towards transferring their expression to forms of performance that are conducive to academic advancement (Cole and Bruner, 1971; Kelly and McConnochie, 1974).

They argue also that low self-esteem and psychological stress engendered by the school system hinder the academic performance of Aboriginal children (Kelly and McConnochie, 1974; Duncan, 1974). Dissonance between the attitudes and values fostered in the home and school environments, in particular, are thought to produce psychological conflict and uncertainty (Education Welfare Group, 1976;

McLaren, 1974; Duncan, 1969). Schools are depicted as institutions in which middle-class values, such as individual success based on competition, operate to shape behaviour and develop skills that fit middle-class models. Having a family background that emphasises kinship, sharing and mutual interdependence, many Aboriginal children at school thus find themselves subjected to forms of discipline, expectations and patterns of interaction that run counter to their home experience. Not only is the stress generated by such conflicts thought to have a detrimental effect on the motivation of these children to learn academic skills in the school context, but it also may disrupt the smooth functioning of perceptual processes that underlie learning (Woodland, 1974).

Racist stereotyping and ethnocentric perspectives in textbooks (Spalding, 1973, 1974a, 1974b; Cotterel, 1975; Harris, 1975) and discrimination by teachers and other pupils (N.S.W. Teacher's Federation, 1969; Duncan, 1969) are thought to aggravate the problems experienced by these children at school. As many Aboriginal children have a history of repeating classes, they also are likely to be older than their classmates and physically conspicuous during the sensitive period of late childhood-early adolescence, when increased self-awareness underlies attempts to establish a sense of personal identity. Not surprisingly, therefore, few are thought to develop a positive self-image in the school context. Consequently, many are thought to seek emotional support from their peer group, often by leaving the stressful school environment as soon as they are able (Guiness, 1969).

1.5 IMPLICATIONS FOR EDUCATIONAL PRACTICE

As noted previously, the distinction made here between home-based and school-based influences, although useful, is somewhat

artificial, as both sets of influences interact and overlap considerably. It was designed to elucidate the multiplicity of complex factors that have been implicated in attempts to explain the poor academic performance of Aboriginal children at school. In so doing, it highlights the importance of cultural, motivational and cognitive discontinuities between the home and school environments of these children. Differing demands, emphases, assumptions and expectations, manifest in varying behavioural patterns that direct the interactions Aboriginal children have with their physical and social environments, all are likely to have a bearing on their academic performance. In the words of Vernon (1969, p.33), there appears to be "a syndrome of mutually interacting adverse factors ... poverty, poor nutrition and health, overcrowded homes, lack of intellectual stimulation, poor schooling, insecure economic future..." which retards the educational achievement of minority group children. In the case of Aborigines, he could also have added the factors of value conflict, motivational dissonance, poor self-esteem, high rates of absenteeism, and discrimination.

Nevertheless, the two focal points, identified in the cultural difference-deficit debate, do have an important bearing on the selection and development of teaching strategies. Thus, if compensatory programmes reflect and reinforce a racist ideology that, through the schooling system, implicitly and explicitly denigrates the abilities, culture and background of Aboriginal children, as some 'difference' theorists suggest (Kelly and McConnochie, 1974), then clearly these programmes are harmful and should be discarded. For not only will they contribute to a system which interferes with the motivation for Aboriginal children to do well academically, but, perhaps more importantly, they may represent an institutionalised means for impeding the development in these children of a secure identity and a positive self-image.

But if the assumption made by opponents of 'compensatory education', that ethnically distinct children from varying sociocultural backgrounds have the same competencies, is used as a basis for teaching programmes, and it is incorrect, then severe consequences may follow for the children concerned; for it implies that teachers need only direct and motivate the expression of already existing competencies to produce performance relevant to the school context. But if the development of competencies underlying academic success is dependent on appropriate environmental stimulation at crucial stages and this is not received at home or at school, then the cognitive development of these children is likely to be seriously and permanently impaired, relative to that of other Australian children. If compensatory education can provide this foundation, without endangering the self-esteem of the Aboriginal children, then clearly it is warranted.

The dilemma is not easily resolved. On the one hand, school-based influences cannot be overlooked in attempts to explain the poor school performance of Aboriginal children. There can be little doubt that the Australian system of formal education suffers from severe shortcomings in its dealings with Aboriginal children and that there is vast room and a pressing need for improvement, both in the quality of education it offers Aboriginal children, and in the emotional climate it creates for them. Towards this end, greater care in the choice of texts, teaching techniques and curricular goals, greater cognisance by educators of the knowledge, motivations, skills and expectations that Aboriginal children bring with them to school, and closer involvement with Aboriginal communities by teachers who are trained to be more aware of, and sensitive to, cultural differences, are important priorities.

Indeed, some steps in this direction already have been undertaken. The last decade has witnessed substantial increases in government expenditure on Aboriginal education, particularly under the Federal Labor Government during the period 1972 to 1975 (Schools Commission, 1975; Barlow, 1979). Resources available to schools classed as disadvantaged and to individual Aboriginal pupils have been upgraded (Watts, 1976). Bilingual programmes (Bourke, 1976) and new teaching methods have been introduced (Craddock, 1976; Maggs and Moore, 1978). Multicultural courses, focusing on Aboriginal culture and subculture have been introduced to some teacher training programmes (Bourke, 1976). The number of Aboriginal teachers and teacher aides has grown and attempts to identify and screen out literary styles and specific texts prejudicial to Aborigines have increased (Spalding, 1973, 1974a, 1974b; Cotterel, 1975). The effects of many of these measures have yet to be assessed fully, and, along with other areas of institutional failure, represent important fields for future research.

On the other hand, however, institutional change is likely to be limited by the social realities of Australian society. Discounting war or political revolution, Australia, as de Lacey (1980) points out, probably will continue to experience a capitalist economy based primarily on self-interest and dominated by the middle class. Institutions such as schools, therefore, are likely to continue for the most part to reflect the ideology and preoccupations of this powerful section of society. Thus, despite signs of growing flexibility in schools, their basic pattern and goals are unlikely to alter greatly.

Consequently, according to this viewpoint, if Aborigines are not to remain victims of this 'reality', and are to achieve a real sense of self-determination, they will need to compete successfully within this institutional framework - at least until they are in a position to modify it in accordance with their needs. To do this, they require skills and knowledge that meet the demands of a complex technological society.

In contemporary Australian society, skills that are advantageous include mastery of Standard English, the abilities to read and to write and the capacities to manipulate highly-differentiated conceptual hierarchies and to comprehend complex logical relations. The more adept an individual is in these skills, the greater his potential access to broad areas of knowledge and to institutionalised positions of power, wealth or prestige. Conversely, children without such skills, or in whom they are poorly developed, have less lifestyle options available to them, and consequently are disadvantaged by comparison with their peers who do have these skills. It is in this sense, then, that Aboriginal children experience what de Lacey (1980) calls a 'pragmatic deficit'. As is evident from this discussion, their performance at tasks requiring number and language skills tends to be especially poor. This is true even for high-contact Aboriginal children who, as we shall see in Chapter 2, have demonstrated levels of cognitive competence equivalent to those of low-socioeconomic European children.

Thus, many Aborigines appear to be caught between the somewhat intransigent demands of a complex, highly technological society which places a premium on abstract rational thought, on the one hand,

and their need to maintain a sense of distinctiveness, self-esteem and pride in the tribal, hunting and gathering tradition of their ancestors on the other. The challenge for educators, therefore, is to facilitate the adjustment by Aborigines to these demands of contemporary Australian society without devaluing their highly-spiritual, low-technology heritage. Specifically, they need to encourage the development in Aboriginal children of skills appropriate for modern life in a climate that does not damage the self-respect of these children.

1.6 THE PRESENT INQUIRY

But if educators are to fulfil this role efficiently, they require comprehensive understandings not only of the sociocultural environments of Aboriginal children, the cognitive and language competencies fostered therein and the relationship between these competencies and school performance, but also of the nature of the adaptive processes underlying the interactions between Aboriginal and White Australians. Despite the vast array of proposed explanations for the poor performance of Aboriginal children at school, however, few exhaustive studies investigating the nature and extent of the relationship between the various implicated variables and school performance have been undertaken. Hence, while many studies have investigated characteristics such as the cognitive and psycholinguistic abilities, personality traits or sociocultural background of Aborigines; and variables, such as prejudice in textbooks, only a comparatively small number have sought to assess directly the influences of these variables on the scholastic status of Aboriginal children.

The relative contributions of differing influences to the scholastic status of Aboriginal children, consequently, is unclear. The level of cognitive development or degree of Standard English mastery reached by a child, for example, may be less useful as predictors of scholastic success for Aboriginal children than for White children. For, as Watts (1974) has stressed, attitudes, values, motives, aspirations, expectations, self-concept or world view may be equally influential. Watts' (1969, 1974) own work, for example, demonstrates the importance of personality variables such as achievement motivation to the school success of adolescent Aboriginal girls, and findings by Wright and Parker (1978) indicate that IQ scores may be less important than locus-of-control orientation as predictors of the scholastic performance of Aboriginal children.

In particular, however, few studies have inquired directly into the question of 'deficit' as regards the sociocultural environment of high-contact Aboriginal children, or into the effects of this environment on their scholastic status and pertinent psychological competencies and predispositions. In addition, few inquiries in the field of Aboriginal education have sought to identify the nature of the mechanisms governing the adaptations made by White and Aboriginal Australians to each other. Hence, little is known about the nature of the constraints on the changes possible for a given sociocultural group over a single generation, or of the nature of influences that may facilitate change. Questions relating to how much, and in what directions, Aboriginal subcultures or mainstream organisations (such as schools) are likely to change, therefore, remain unanswered. Complex socio-psychological interactions, for example, may place limits on the adaptive capacity, and hence, on the school performance of Aboriginal children, as well as on the adaptive capacity of White

Australians. So far, however, no conceptual framework adequately explaining these adaptive processes, and hence providing an overall perspective and sense of direction for educational policies relating to Aborigines, has received widespread acceptance by educators.

The purpose of the present inquiry, therefore, is to help fill these gaps. In particular, it seeks to provide information on the nature of the influences impeding Aboriginal performance on tasks requiring number and reading skills. More generally, however, it seeks to shed light on the nature of the adaptive processes governing Aboriginal-White interactions. Specifically, then, this inquiry has three goals. The first is to clarify theoretical issues surrounding the deficit-difference debate as it relates to Aboriginal cognition, language and culture. The second is to identify more precisely than have previous inquiries in this field the nature of the subculture to which a community of high-contact Aborigines belong, and in the process, to provide insights into the nature of the adaptive mechanisms underlying its emergence, and hence, underlying social change generally. The third is to examine quantitatively the sociocultural background, cognitive and language performance, locus-of-control orientation and scholastic status (and their interrelationships) of a group of high-contact Aboriginal children and a comparison group of low-socioeconomic White Australian children living on the Far South Coast of New South Wales.

The nature of these tasks required the development of a flexible interdisciplinary approach. The rigid conceptual and methodological framework of a single discipline was thought to impose constraints that were too limiting for an adequate explanation of the multifaceted and dynamic processes that were under investigation.

Thus, in an attempt to overcome these constraints and to take advantage of insights gained from the perspectives, conceptual tools and methodologies of several disciplines, this inquiry has adopted an eclectic orientation that incorporates elements from anthropology, sociology, psychology, linguistics, education and history. By so doing, it seeks to go beyond previous attempts at unravelling the web of interactions linking Aboriginal schooling, cognition and culture, and to provide a comprehensive theoretical and empirical foundation for bringing about improvements in Aboriginal scholastic status in the future.

Towards these ends, the thesis has been divided into two sections. As has been noted, the first, Part A, to which this Chapter belongs, focuses on theoretical issues and associated research findings related to the schooling, cognition, language and culture of Aborigines, concentrating in particular on the deficit-difference controversy. The second, Part B, reports and evaluates socio-historical and quantitative research findings on the culture, psychology and schooling of Aborigines on the Far South Coast of New South Wales.

Thus, in summary, this Chapter has sought to outline the social and educational status of Aborigines in contemporary Australian society, to highlight important considerations relating to 'deficit' and 'difference' interpretations of their academic failure, and to introduce the research reported herein. We now pass on to a consideration of theoretical issues and relevant research related to Aboriginal cognition.

CHAPTER 2

ABORIGINAL COGNITION: THEORY AND RESEARCH

2.1 INTRODUCTION

Are Aboriginal children able to profit from formal schooling to the same degree as European children? Do they possess the intellectual prerequisites necessary for successful school performance? What is the nature and status of Aboriginal cognition?

Although varying over time with regard to both emphasis and precision, questions such as these have a long history and have important implications for educational policies and practices. A recurrent controversy has centred on the question of the 'improvability' of Aboriginal intellectual performance. If given appropriate circumstances, were Aborigines as capable as Europeans at performing intellectual tasks, and were they therefore able to adapt successfully to European civilisation, or were they immutably intellectually inferior and unable to adapt? The controversy concerned potential rather than performance for, while the idea of equivalence in intellectual potential between Europeans and Aborigines was debated by some authors, the idea of their equivalence in intellectual competence rarely has been accepted as a legitimate proposition. Hence, an underlying assumption of much of the discussion of Aboriginal cognition has been the intellectual superiority of Europeans. Evidence cited for this superiority has varied from time to time, however, according to the state of conceptual refinement and scientific techniques.

It is useful, therefore, to place into historical context research on Aboriginal cognitive abilities if its contribution to our understanding of Aboriginal cognition is to be evaluated fully. By so doing, not only will light be thrown on the nature of cognition

generally, by examining the conceptual and quantitative tools that guide our understanding of it and their underlying assumptions, but a fuller appreciation of issues related to the application of such concepts and indices, developed in one culture, to people in another culture also may be gained. As the development of Western concepts and gauges of intellectual abilities has been reported fully elsewhere (Burt, 1955; Butcher, 1968; Guilford, 1967; Nurcombe, 1976), only a comparatively brief review of general trends, highlighting issues of particular relevance to Aboriginal cognition and accompanying pertinent research, is necessary for the purpose of this discussion.

Reports and studies of Aboriginal cognition consequently are reviewed in the context of three phases in the development of such formulations and indices. The first concerns the impact of evolutionary theory and nineteenth century concepts of 'mentality' on interpretations of Aboriginal abilities. This is followed by an examination of the nature and cross-cultural utility of the concept of intelligence, and of attempts to measure it in Aborigines, as exemplified by the work of Stanley Porteus. Finally, modern concepts of cognition, based primarily on the developmental model of Jean Piaget, are discussed and relevant research reviewed. These three phases represent a somewhat pendulum-like swing away from an undifferentiated holistic approach to the understanding of human abilities towards a more highly differentiated molecular approach, and back to a more molar interactionist approach. However, significant advances in theoretical and empirical knowledge separate Phases 1 and 3. Within each phase, theoretical issues are considered first, followed by a review of relevant research with Aborigines.

The discussion highlights the ethnocentricity and theoretical circularity of many earlier attempts to assess abilities, and points to the complexity and extensiveness of cultural influences that may underlie group variations in assessed performance. In particular, stress is placed upon the relationship between performance on standardised tests and contact with the mainstream of Western society, and the consequent need for more comprehensive knowledge of the nature of this contact and of the particular sociocultural characteristics associated with various levels of performance.

2.2 EARLY CONCEPTS AND GAUGES OF INTELLECT

Although interest in the nature of human thinking dates back to at least the early Greek philosophers, it was not until the late nineteenth century that substantial systematic attempts to identify and measure its various components were made. Controversies, representing extensions of the nature-nurture debates between Rationalist and Empiricist philosophers of the seventeenth and eighteenth centuries, remained, but issues were gradually clarified. With the emergence of scientific methodology and the increasing differentiation of fields of inquiry into distinct disciplines, new procedures, tools and concepts were gradually developed. As a result, the ubiquitous concept of 'mentality' became differentiated into the concepts of morality and intellect, with intellect being refined further as a psychometric concept of intelligence emerged. This progression is reviewed in this Section.

2.2.1 The Darwinian Impact:

A major influence on the development of thinking concerning the nature of human abilities and the reasons for individual and group differences throughout the latter part of the nineteenth and early twentieth centuries, was the evolutionary theory of Charles Darwin (1859). His conclusions, based on sound scientific principles, sent shockwaves throughout the scientific and religious worlds of his day. He demonstrated a basic link between man and animal, and plotted a course of human development that challenged centuries-old distinctions and teachings. His emphases on variation within species, competition for survival, and natural selection led to the development of new concepts and perspectives that provided a framework for explaining individual and group differences. In so doing, he set in motion the practice of placing man, his abilities and his achievements on an evolutionary continuum. Subsequently, both individuals and groups were placed at various points along this continuum. In addition, by emphasising the need for observable empirical data in contrast to the introspective techniques of many of his colleagues, he provided an impetus for the use of the scientific method in attempts to understand the nature of man.

But concepts employed in the comprehension of intellect throughout the latter part of the nineteenth century often tended to be undifferentiated and imprecise. Many theorists postulated a basic identity between man's physical, social and mental evolution (Chase and von Sturmer, 1973). Development in one sphere was thought to be paralleled in other spheres, and concepts such as 'mental culture' and 'social intelligence' were not uncommon. Similarly, as noted above, morality and intellect were thought to reflect each other and were tied

together under the concept of 'mentality'. Cross-cultural comparisons were usually based on the assumption that Europeans represented the most advanced human group. Hence, evidence of the mental inferiority of 'savage' races could be found in sources as varied as their physical characteristics, 'lower' morality, 'primitive' technology or 'simple' social organisation. Such arguments tended to be circular and mutually reinforcing, but were effective in enhancing the Europeans' belief in their own intellectual and cultural superiority over most other ethnic groups and consequently, in the 'inevitable' displacement of 'lesser' civilisations by their own, as part of the evolutionary process.

With the advance of scientific methodology throughout the nineteenth century, however, new, more precise gauges of intellect gradually were developed. Language formed the basis of many of the earliest attempts at objective quantification of intellectual differences between groups that went beyond vague references to sociocultural differences. It was thought to provide an "... index of mental culture and social and intellectual progress attained by those who make use of it and find it sufficient for the expression of their various thoughts, feelings and desires" (quoted in Chase and von Sturmer, 1973, p.9). As the role of language in cognition is still far from clear, and as it plays such a vital role in contemporary debates concerning the education of minority groups such as Aborigines, it is discussed in considerable detail in Chapter 3. Progressively, with the development of physical anthropology and experimental psychology, other more sophisticated attempts at quantifying 'mentality' in the form of phrenology and sensorimotor investigations were made.

Based on the old idea that the mind had a few principal faculties (thinking, feeling and willing) that were subdivided into several dozen subfaculties such as love, memory, imagination, cautiousness, curiosity, musical ability and numerical ability, the science of phrenology was developed principally by the anatomist Franz Gall and his associates early last century. It formed "... an elaborate system ... that proposed not only that such complex mental subfaculties ... could be precisely located in the brain, but that the convolutions of the skull gave evidence of the strength of the faculties located beneath" (Hilgard and Atkinson, 1967, p.13). Hence, throughout the century, increasingly more sophisticated measurements of characteristics such as the shape of the head, the position of lumps on the cranium and the size of the brain, that were thought to act as indicators of a 'fixed' mentality, were progressively developed.

Continuing the tradition of the nature-nurture controversy, Associationists opposed this view. They denied the existence of inborn mental faculties and argued that ideas entered the mind through the senses. Mental activity, they contended, consisted of the association of ideas based on principles such as contiguity, contrast and similarity. Their 'sensory' emphasis was continued in the form of physiological studies by Fechner, von Hemholtz and later, Wundt, who pioneered the development of experimental psychology (Thompson, 1968). New aids, both mechanical and statistical, and new 'scientific' procedures, consequently were introduced to the study of human abilities. Measurements of sensorimotor and perceptual characteristics that were thought to provide 'objective' evidence in the assessment of 'mentality' in particular, increased in precision and clarity.

2.3 EARLY ABORIGINAL STUDIES

It was in this context that Aborigines were first investigated. Chase and von Sturmer (1973) point out that these studies were undertaken, not so much to learn about Aborigines, as to learn about the 'primitive' end of the human developmental spectrum - "The task was not to find out whether the Aborigine was inferior to the European, the Asian, or the American Indian - this was already known - it was, instead, a task of confirmation, of mustering up the evidence so that the picture, the outlines of which were already strongly developed, could be filled in to the smallest detail" (p.12). Aborigines, along with other 'barbaric races' were considered by most Europeans to be 'living fossils', relics from a past age "... possessing the details and secrets..." (p.13) of a bygone phase in European man's mental and social evolution. The antiquity, uniqueness and prolonged isolation of Australia marked Aborigines for particular attention from the "... student of mankind, [for] here was a country in which progress had stopped" (p.4).

Consequently, many early reports of Aboriginal intellect were highly unfavourable and reflected the nineteenth century confusion between social, technological, moral, perceptual and intellectual characteristics of mankind. The comparatively simple technology of Aboriginal culture, for example, was taken as evidence of their intellectual inferiority. Hence, in his report to the Select Committee into needs for an Aboriginal Protection Bill in South Australia, Gillen (1899) an "... expert on Aborigines" could assert that the "Aborigines are the lowest in the scale of barbarian races as well as the lowest in human intelligence". He conceded that "... black and white infants would be on an equality of intelligence" but that even if he graduated

from a university, an Aborigine "... would revert to barbarism". The difference between Europeans and Aborigines was that "... we came from a race that had 1800 years of civilisation" (p.119).

Employing similarly diffuse thinking, Wake (1872) argued: "To speak (however) of intellectual phenomena in relation to the Australian aborigines is somewhat of a misnomer. This race presents, in fact, hardly any of what are usually understood as the phenomena of intellect" (p.74). He agreed that they may be "... superior in penetration and judgement" to Whites in matters related to survival in the bush, "... but the facts it proves are quite consistent with the low position I have assigned the Australian aborigines, a position which their moral defects ... requires for them" (p.76). Elaborating, he argued that the fact that "... moral ideas, in the case of the Australian aborigines remain almost wholly undeveloped ... is shown by nothing better than the slight regard paid among them to female chastity" (p.76). From the ethnocentric perspective of the nineteenth century European, it was clear that both the technology and morality of Aborigines afforded ample evidence of their intellectual inferiority.

A major issue of the time centred on the question of whether Aborigines possessed instinctive characteristics that limited the possibilities of their intellectual development, or whether they possessed child-like characteristics that were capable of improvement (Chase and von Sturmer, 1973). On the one hand, 'savages' such as Aborigines were considered to be more 'animal-like' than 'civilised' man. They were thought to be motivated by instincts over which they had no control, but which adapted them well for survival in their 'natural state'. Such instincts were quite unlike the 'higher' mental

processes of civilised men who had advanced beyond an immediate dependence on their natural surroundings. Consequently, according to this viewpoint, Aborigines were incapable of adjusting to civilisation.

Opposing the determinism of this view, on the other hand, were those who claimed that Aborigines were more 'child-like' than 'animal-like'. Wake (1872), for example, wrote: "To sum up ... it is evident that the aborigines of Australia as compared with races who have made further progress in mental culture, are yet in the condition of children" (p.82). A change in environmental circumstances could bring about improvement, he argued, but it would probably be a slow, arduous process. What both viewpoints had in common, however, was the belief that Aboriginal intellectual competence was inferior to that of Europeans.

The 'lower morality' and 'primitive' social organisation of Aborigines were reinforced as indicators of their inferior mentality by other measures. Phrenologists, for example, claimed that: "Aboriginal crania showed strong evidence of 'primitive' characteristics - marked dolicocephaly, sharply sloping brow, prominent supraorbital ridges, heaviness of bone structure" and that Aborigines had "... a brain which was smaller and lighter than its European counterpart, and less complex in its structure", with development of the frontal lobe, "... the seat of intellect", especially lacking (Chase and von Sturmer, 1973, p.11). Its shape also was thought to highlight their poor morality. Hence, in his report to the Victorian Legislative Council in 1854, Parker notes, with regard to the Aborigines, that their "... forehead is ... generally narrow ... [as is] the whole head, indicating ... among other differences, the absence of the quality called conscientiousness ... the greatest deficiencies

in the development of the Aboriginal cranium are in the organs which are regarded as indicators of moral qualities" (Parker, 1854, p.71). In a similar vein, Fiske notes that: "If we take into account the creasing of the cerebral surface, the differences between the brain of a Shakespeare and that of an Australian savage would doubtless be fifty times greater than the difference between the Australian's brain and that of an orang-outang" (quoted in Nurcombe, 1976, p.22).

Sensorimotor studies were conducted, but usually with a view towards validating the claim that, as 'primitive' groups were more dependent on their 'instincts' for survival than was 'civilised' man, their sensory capacities would be more fully developed. This was thought to explain, for example, why 'black trackers' were so effective. Perhaps the most penetrating examination of this kind was carried out by an expedition led by A.C. Haddon, reported by Rivers (1901). A wide range of perceptual acuity and reaction time tests were administered but, as Kearney notes, "... results indicated that in many areas there was little difference between the sensory and perceptual skills of the subjects and English norms" (1973, p.18). Later studies, however, have demonstrated superior visual acuity (and memory) of Aborigines relative to Europeans (Fry, 1935; Kearins, 1976),⁽¹⁾ but the findings are no longer interpreted as indicating Aboriginal intellectual inferiority.

2.4 PSYCHOMETRICS AND THE CONCEPT OF INTELLIGENCE

As noted previously, towards the end of the nineteenth century and the beginning of the twentieth century, a second phase in the assessment of intellect emerged as new concepts were being

(1) Fry's and Kearin's studies are discussed later in the Chapter, in Sections 2.5 and 2.5.2 respectively.

refined and new measures were being developed. Differences between moral, temperamental, intellectual and perceptual aspects of 'mentality' gradually were made more explicit as the demands for scientific objectivity and precision became more pronounced. A corollary of this trend was a growing tendency to challenge the legitimacy of using sensorimotor, phrenological or technological characteristics as indicators of intellectual capacities (Wissler, 1901; Sharp, 1899). Foreshadowing Berry's (1974) ecological functionalist hypothesis,⁽¹⁾ Woodworth (1910), for example, argued that comparisons of civilisations and achievements are not valid indicators of 'mental powers' as civilisation depends on invention, and invention, to a large extent, on necessity.

Progressively the need for more precise definitions and more valid and direct measures of intellectual abilities led to the development of a quantifiable concept of intelligence. Since its inception, however, the concept has been plagued by controversy. As it relies on a statistical rather than a theoretical base, attempts to determine precisely the nature of the human capacities to which it refers have proven difficult. Hence, although many definitions have been attempted, few have found universal acceptance. Critics claim that there is a mutually reinforcing circularity between the concept and the tools used to measure it. They argue that since both the concept and the tools have evolved in Western society, with their roots in the development of the discipline of Psychology and the spread of the Western education system, they form a questionable base for cross-cultural comparisons of intellect (Nurcombe, 1976). To understand the assumptions implicit in this concept and its validity as a tool for understanding Aboriginal cognition, it is important to trace briefly its history.

(1) This is discussed later in the Chapter (2.6.2).

Probably the most important figures in the development of the modern Western concept of intelligence were Herbert Spencer, Francis Galton and Alfred Binet. Quoting Guilford, Burt (1955) points out that the idea of "... intelligence as a unitary entity was a gift to psychology from biology through the instrumentality of Herbert Spencer" (p.184). In his book Principles of Psychology (1870), Spencer devoted three chapters to a discussion of the nature of intelligence in animals and man. He distinguished between cognitive and affective dimensions of mental life and developed a theory which described a hierarchical organisation of the mind and nervous system.

Galton's (1869, 1883) major contribution was in refining the concept to a point which led subsequently to its quantification. He argued that all human beings had an 'inherited general cognitive ability' that was measurable and was distributed normally in any given population. Much influenced by evolutionary theory, with its emphasis on variation, competition and survival of the fittest, he concentrated on the study of human intellectual differences and was a keen supporter of the eugenics movements. He saw Western society as providing an arena in which only the most able succeeded in advancing to a position of 'eminence'. Those with lesser ability found their limits lower down the social scale. He argued that differences between racial groups could be explained similarly, and that natural selection had resulted in the mental, and hence technological, superiority of Caucasians over other races. In his view, "...the number amongst the negroes of those whom we should call half-witted men is very large ... [their mistakes] were so childish, stupid and simpleton-like as to frequently make me ashamed of my own species ... The Australian type is at least one grade below the African negro" (quoted in Nurcombe, 1976, p.21). In an attempt to quantify these differences, he devised a system of

rating scales which led subsequently to his invention of the statistical technique of correlation, an important tool for the future development of psychometrics. He also made some attempts to devise mental ability tests, but it was the work of Binet that was most influential in this field.

Commissioned by the Minister for Public Instruction to identify children who were unlikely to succeed in the French public schools system, and acknowledging their debt to Spencer and Galton, Binet and his associates (1905, 1908) devised a test battery that, after several revisions, became the first generally accepted test of intelligence. Nurcombe (1976) remarks that in "... final form the test consisted of an eclectic group of problems to do with coordination, comprehension, memory, recognition, sensory discrimination, concentration, verbal conceptualization, verbal fluency and general knowledge. It was loaded with verbal items cast in a form similar to that of the conventional school syllabus - not unexpectedly, of course, in view of the origin, purpose and validation of the test" (p.7). Working at Stanford University, Terman and his colleagues (1916, 1937, 1960) translated the test, modified it to fit the American context and revised it several times to produce the version that became known as the Stanford-Binet.

The importance of Binet's work to any discussion of the modern concept of intelligence cannot be over-emphasised. His test formed the basis for most subsequent intelligence testing and, along with Galton's formulations, highlights the ethnocentric nature of the concept and its historic links with the idea of success in Western schooling and, ultimately, in Western middle-class society. Both the behaviour regarded as intelligent and the way in which it was assessed

were attuned to the demands of the school, reflecting a bias that was to prove a constant source of criticism of the concept. Binet also introduced the concept of mental age, which later led to the idea of an intelligence quotient or I.Q. The higher a person's I.Q., the more intelligent he was considered to be. Hence, for many, the range of competencies sampled by these tests became defined as intelligence.

Western psychologists had thus developed, refined and quantified a concept which, many believed, enabled them to discriminate validly between individuals according to their intellectual capacities and to grade them accordingly. Tests of intelligence or aptitude were thus constructed and performance on them evaluated under the assumption that they assessed an 'innate capacity to learn' and could thus predict performance not yet attained. They were distinguished from 'achievement' tests which, in contrast, were designed to assess acquired skill. The well-documented success of intelligence tests at predicting the school performance of European children was considered to provide confirmatory evidence of the contention that those children who did poorly on them, did so because of genetically-determined limits on their intelligence.

It appeared a simple and logical progression to compare group means in I.Q. scores and to conclude that genetic variation explained differences between these means. Thus the consistently superior performance of Western middle-class children on these tests relative to the performance of children from other socioeconomic, ethnic or cultural groups was interpreted as providing evidence of their genetically-determined intellectual superiority over these groups. Contemporary theorists such as Eysenck (1971) and Jensen (1969, 1973), for example, as noted in Chapter 1, cite variations in I.Q. scores to support their contention that the cognitive performance of some racial groups may be

limited relative to other groups of variations between them in their respective gene pools.

But critics have challenged such conclusions and thrown open the question of "... whether the concept of intelligence as a factor in learning, which is independent of previous learning and of motivation, is theoretically useful and practically helpful" (Dockrell, 1970, p.3). Hilgard and Atkinson (1967), for example, caution that the distinction between achievement tests and aptitude tests is somewhat blurred. Although primarily distinguished in terms of their purpose in contrast to their content, both kinds of tests were ability tests that sampled competencies that were "... complex results of innate potential, generalized experience with the environment and specific training" (p.439).

In fact, as Burt (1970) notes in his defence of the utility of the concept, each element of Galton's original formulation has been challenged. Hence, questions such as whether intelligence comprises a set of specific abilities or a unitary general ability; how much it is a product of genetic or environmental influences; and the degree to which it is a cognitive characteristic that is independent of both conative and affective influences, all have long histories as controversial subjects which recent developments in cross-cultural psychology have only exacerbated.

The 'specific' versus 'general' dilemma concerning the nature of intelligence, for example, represents a precursor to controversies associated with the nature of abilities developed by culturally different groups. Although exceptions occurred, the trend was for British psychologists to support the view that intelligence was a single superordinate ability and for American psychologists to support the view that it consisted of several specific abilities. Spearman (1927), for example, using factor analysis, produced extensive evidence for the

predominance of a general factor or 'g' and advocated its dominance, even to the point of denying any importance to specific abilities which he regarded as 'an antiquated relic of obsolete faculty doctrine'. Americans such as Thorndike (1927), Thurstone (1955) and Guilford (1967) challenged his conclusions. They argued that specific abilities were of primary importance, but conceded that some overlapping may occur at a lower level. Thurstone identified seven primary abilities, and Guilford developed a model with 120 component abilities. After years of fierce controversy, a consensus began to emerge in which a morphological model of intelligence was described as comprising both overlapping generalities and specific tendencies. Earlier contradictions were attributed to the underlying logic of the varying statistical procedures (Butcher, 1968; Burt, 1970). However, recent theorists have re-opened the argument by suggesting that differing cultural milieux may favour the development of varying profiles of a spectrum of abilities and that the Western concept of intelligence may be inappropriate for the assessment of such abilities (Nurcombe, 1976).

Argument also has persisted over whether a person's cognitive functioning can be separated from the emotional and motivational spheres of his psychological make-up. Wiseman (1973) cautions that "... the division into cognitive, affective and conative areas of psychological functioning as a useful means for structuring the complexities of a new science should not lead people to think of them as existing in independent watertight compartments" (p.9). Burt (1970) investigated the influence of conative factors, such as attention, on test performance and concluded that his research supports the contention that in addition to, and independent of, 'general intelligence' there exists a 'general emotionality factor' but not separate affective or conative dimensions. He adds a warning, however, which

has important implications for cross-cultural research, that motivation to perform well on the tests may vary according to such factors as who gives the test.

Perhaps the most heated controversy related to the concept of intelligence is the degree to which it is a product of nature or nurture. Elkind (1971) observes that: "For the psychometrician ... nature and nurture are regarded as substantive and static and their contributions are assessed quantitatively with the aid of statistical aids" (p.242). Burt (1970) argues that evidence for genetic determination of intelligence can be found statistically in studies which show a consistent trend for I.Q. correlations to be higher between individuals the more closely linked they are genetically; in the normal distribution of I.Q. scores; and in the regression to the mean of children's I.Q. scores relative to the scores of their parents. He claims that the evidence suggests that the difference between genetic and environmental influences on the variability of I.Q. scores in a relatively homogeneous European population is approximately 4:1.

But Kamin (1977) has challenged Burt's data base, arguing that it is imprecise and 'not impartial'; and Vernon (1969) warns that environmental variations between different cultural groups may be considerably greater than for the homogeneous normative population, thus rendering inapplicable such ratios for them. Vernon also suggests that genetic and environmental contributions to intelligence are best viewed as an interacting system rather than as discrete components. Nevertheless, as indicated previously, Eysenck (1971) and Jensen (1969, 1973) have extended Burt's arguments to explain racial differences in I.Q. scores, by arguing that the lower average I.Q. of American Negroes compared to American Whites occurs because the Negroes, on average, are less intelligent than the Whites. Following the Nazi

atrocities of World War II and the growing assertiveness and influence of 'third world' nations and racially distinct minority groups in Western society, such views have proven extremely controversial and have been the subject of constant criticism (Hunt, 1972).

2.4.1 Intercultural Limitations:

Critics charge that the application of tests developed in one culture to members of another culture, or subculture within that culture, is fraught with difficulties. They argue that tests are matters of tradition and culture, and question their validity as gauges of the intellectual capacity of culturally different groups. Language; familiarity with the test items, aims and administration; motivation to do well; the test situation; and the tester; all may influence test performance. Such considerations have led Serpell (1976) to conclude, after examining cross-cultural literature on the subject, that the question of whether or not abilities fostered in Western middle-class environments also are fostered in culturally different environments remains open. Similarly, with regard to racial differences in test performance, Triandis (1974) comments that "We are faced with innumerable rival hypotheses concerning differences in performance which have little to do with the level of ability per se - for example, differences in motivation, experimenter bias, anxiety-ability interactions, comprehension of instructions, familiarity with test materials, differential reliability and validity, response sets, etc." (p.27). Both authors are in agreement therefore with Labov's (1970)⁽¹⁾ contention that differences in test performance between minority groups and middle-class groups may not reflect differences in capacity, but differences in motivation.

(1) Labov's work will be discussed more fully in Chapter 3.

Jensen's and Eysenck's arguments, therefore, are open to accusations of ethnocentricity for being based on what Triandis (1974) calls the 'pseudo-etic' approach of much contemporary cross-cultural research. Initially coined by the linguist Pike (1967), the terms 'emic' and 'etic' were derived from the words 'phonemic' and 'phonetic'. According to Pike (p.38), "... emic descriptions provide an internal view with criteria chosen from within the system". Such a view is culturally specific and utilises concepts relevant only to that culture in the description of phenomena. In contrast, an etic approach employs criteria that are independent of any one culture. Ideally, phenomena are studied by utilising universal concepts and frameworks which are brought to bear on the situation by the observer, hence enabling valid comparisons between members of different cultures along universally relevant dimensions. A 'pseudo-etic' approach, then, is one where an emic measure, usually developed in Western culture, "... is supposed to be etic - that is universal" (Triandis, 1974, p.28). Both the concept and gauges of intelligence are vulnerable to such criticisms, thereby casting doubts on their utility in cross-cultural research.

Attempts to eliminate cultural and educational influences on test performance by developing 'culture free' or 'culture fair' tests have generally been unsuccessful. They have usually involved several re-formulations of the concept of intelligence, such as Cattell's (1963) fluid and crystallised intelligence, Hebb's (1949) Intelligence A and B and its extension by Vernon (1969) to include Intelligence C. Essentially these authors have attempted to differentiate between genetic potential, the outcome of genetic-environmental interactions, and, in Vernon's case, performance on intelligence tests.⁽¹⁾ Samples of tests designed to minimise cultural influences on performance include Cattell's 'culture fair' tests (Cattell, 1940; Cattell et al., 1941);

(1) For elaboration, see p.55.

Kohs' Blocks (Kohs, 1923) and Raven's Progressive Matrices (Penrose and Raven, 1937).⁽¹⁾ Usually in such tests the language component is minimal or non-existent and, as Nurcombe (1976) notes, most "...have tended to emphasise spatial and quantitative reasoning items such as the solution of matrix problems and two and three dimensional design problems" (p.11). But performance on such tests continues to vary according to racial, cultural and socioeconomic indices and is often related to the degree of contact a group has with Western middle-class culture (Kelly and McConnochie, 1974).

Nurcombe (1976) suggests that such differences are best explained in terms of the failure of intelligence tests to meet criteria of validity and reliability in varying cultural contexts, rather than in terms of genetic differences between groups. The criteria which he suggests a test should meet, if it is to evaluate a representative sample of intellectual performance in a reliable and valid way, include: standardised administration and assessment; comprehensible and acceptable content, construction, administration and purpose, designed to maximise the subject's performance; reliability; predictive ability; content validity so that test items tap adequately and economically a representative sample of the ability being evaluated; and construct validity such that the constructs being measured are based on culturally appropriate, empirically derived theoretical principles (pp.13-14). He concludes that the reliability and validity of intelligence tests are locked into a circular relationship with school performance and that they may have little relevance beyond this sphere. He remarks also that in cross-cultural settings, content validity and maximal performance are difficult to ensure, as intelligence tests sample only a limited

(1) Similar tests, such as the Porteus Maze (Porteus, 1965) and the Queensland Test (Ord, 1970; McElwain and Kearney, 1970), that have been used with Australian Aborigines, are discussed in Section 2.5.

dimension of cognition in Western culture and may not even sample this in non-Western culture; and because motivational cues are difficult to determine and evaluate.

But Nurcombe's major criticism concerns their construct validity. They:

... are not based on empirically derived, empirically tested, and empirically stated theoretical laws of intellectual functioning ... Until, through cross-cultural research, we have defined the fundamental spectrum of human abilities and the laws of their interaction, intelligence tests and similar instruments should be restricted to the utilitarian purpose for which they have been designed: to predict performance in a Western educational system (1976, p.15).

Although maintaining that the concept of intelligence is useful, Butcher (1968) agrees when he notes that: "... the study of human intelligence has yielded a large accumulation of knowledge about individual differences but relatively little about basic laws of cognitive functioning" (p.11).

Hence, implicit in criticisms of intelligence tests, is criticism of the utility of the concept of intelligence itself in cross-cultural research. Critics argue that it has been defined too tightly within the context of intellectual skills demonstrated by Europeans and that consequently it is too narrow and ethnocentric a concept to be applied usefully in the analysis and comprehension of the cognitive abilities of culturally different groups. Nurcombe (1976), for example, notes that some members of each community are more adept at exhibiting valued behaviour than others, but that this behaviour varies both within groups over time and between groups. Customs, traditions, values, attitudes and lifestyles all influence the nature of abilities that are considered by a particular group.

From an emic viewpoint, then, the question of whether there are different kinds of intelligence arises. Burt (1970) argues that there are not different kinds of intelligence, only different interpretations of the same thing. Nurcombe disagrees and, acknowledging his debt to Vernon (1969), argues that "... intelligence B⁽¹⁾ is not a universal single faculty which varies along one dimension in people and races (the water in the pitcher theory) but, rather, the name for an accumulation of different cognitive skills developed in and valued by different cultural groups"(1976, p.16). He elaborates this view by arguing that the concept of intelligence should be discarded. In its place, he proposes a model which differentiates between potential, competence and performance and which, he argues, has greater utility in cross-cultural comparisons. It is discussed more fully later in this Chapter.

2.5 ABORIGINES AND INTELLIGENCE

Following overseas trends, some researchers in Australia began to incorporate psychometric tests into their investigations of Aboriginal intellect. Although comparatively few in number, such studies have a long history, commencing early in the twentieth century, and have increased in frequency during recent years. In common with experience elsewhere, however, the difficulties of applying what were essentially emic measures in an etic way were felt quickly.

(1) According to Vernon (1969), Intelligence B is observable intelligent behaviour that is a product of a favourable environment and a genetic capacity, in contrast to Intelligence A which refers to inherited potential, and Intelligence C which refers to Mental Age, or Intelligence Quotient.

Consequently, much of the research was directed towards developing a test battery, usually of the performance type, that was both an appropriate and a valid gauge of the 'mental abilities' of Aborigines. The poor performance they exhibited on such tests, in comparison to European norms, was generally interpreted as reinforcing the old view that Aborigines were intellectually inferior to Whites and, hence, unlikely to be able to adapt to White society. In recent years, as genetic explanations for the poor performance have been replaced by environmental explanations, controversy concerning the extent to which such studies have been truly etic continues.

The adoption of 'modern' psychometric techniques proved to be a gradual process, however, and studies incorporating sensorimotor, perceptual and cranial measures, based on the assumption that Aborigines represented an earlier stage in man's evolutionary development, continued well into the twentieth century (Fry and Pulleine, 1931; Porteus, 1931). As late as 1953, Fry claimed that the "... aboriginal peoples not only have anatomical features suggestive of those of paleolithic man, but are also living representatives of a human society still in a stone-age culture. They can therefore be expected to provide source material concerning primitive human traits and under this assumption data will be drawn on ..." (Fry, 1953, p.543). In summarising research in the field, however, he concludes that in regard to the question of "... whether the aboriginal brain exhibits any fundamental differences from the form of a civilized race, the answer appears to be in the negative" (p.543). Various standardised sensorimotor and perceptual measures similar to those used by the Haddon expedition (Rivers, 1901) referred to previously, were found to be either unsuitable, or to indicate differences that were either slight

or not directly relevant to intellectual functioning (e.g. strength of grip, tolerance to pain, or sensitivity of the soles of the feet to touch). Initial findings, by Fry and his associates, of superior visual acuity amongst Aborigines by comparison with Europeans were unconfirmed in their later studies and remained so until re-investigated by Kearins (1976). Progressively, however, as these kinds of gauges came to be considered inadequate for assessing intellect, they were replaced by more 'modern' psychometric techniques based on the concept of intelligence (as opposed to mentality).

2.5.1 Stanley Porteus:

Probably the most important of the early research workers to adopt the new techniques in studies of Aboriginal intellect was Stanley Porteus. Extending over a period of 50 years, his work long dominated the field. He devised, administered and progressively modified the Porteus Maze Test, perhaps the most extensively used psychometric gauge in studies of Aboriginal intellectual abilities. His work typified early attempts at culture-free (or fair) testing of intelligence and in general supported and perpetuated the notion that Aborigines were more limited intellectually than Europeans. In the relative absence of comprehensive critiques of his work, and as it epitomises both an important phase in studies of Aboriginal cognition, and in a broader context, the ethnocentric approach of Western social scientists to the assessment of the cognitive abilities of culturally different groups, it is examined critically in considerable detail.⁽¹⁾ Quotations are used extensively in an attempt to capture the overall flavour of his work and to reflect accurately his interpretations.

(1) A brief summary of Porteus' findings and conclusions with an alternative interpretation to that of Porteus has been made by Kearney (1973). Elkin (1932) and Fry (1935) also have offered criticisms.

The Porteus Maze is a pencil-and-paper test that consists of a series of progressively more complex mazes. Its final version consists of the Original, Extension and Supplement forms. Three scores are obtained: a mental-age score, which is dependent on the number of mazes successfully completed; a quality, or 'Q' score, which is based on the number of errors that occur while tracing the mazes (such as touching the side of the maze, or lifting the pencil); and a conformity-flexibility (C-F) score, which is based on the length of line drawn in incorrect responses. The first score provides an assessment of 'practical intelligence' and the latter two of 'temperament'. As the test was non-verbal, it was widely accepted as a culturally fair index of intelligence and, in modified form, was incorporated into the performance part of the Stanford-Binet.

In general, the average performance of Aborigines on the Porteus Maze Test was found to be inferior to White Australian norms, but individual and group differences were substantial, with sex, age and geographic location being important factors. Compared with the performance of other 'primitive' groups, "Australids are ranked mainly in the middle division, with the Arunta (Aranda) taking their place near the low end of the high division" (Porteus, 1966, p.55). Central Australian Aborigines, such as the 'Aruntas', usually scored significantly better than those towards the north-west, and men were significantly higher scorers than women (Porteus, 1931; Fry and Pulleine, 1931; Piddington and Piddington, 1932; Porteus and Gregor, 1963). In addition, performance on the test was found to deteriorate with age (Porteus, 1917; Porteus, 1933; Porteus and David, 1966; Porteus, Bochner, Russell and David, 1967). Porteus concludes that the

"... variance in ethnic group performances in the Maze, just as it is for individuals arises mainly from differences in native ability ... cultural and nurtural advantages have considerable influence, but as determining factors come far short of outweighing the natural and probably hereditary difference in mentality" (Porteus and Gregor, 1963, p.722). As will be noted later in the Chapter, this conclusion was challenged by subsequent authors.

The only other measure Porteus thought useful for using with Aborigines was "... a memory test founded on the tapping of xylophone keys in a certain order" (1965, p.177). He reasoned that "... rote memory for unrelated material is essential for school progress, and if memory is defective in this regard the school progress must needs be limited". With regard to Aborigines, he concluded that "... in auditory memory their performance can only be matched by the feeble-minded of our own race" (1933, p.34). Noting the outstanding examples of memory exhibited by Aborigines in their everyday lives, Porteus distinguishes between 'associative' and 'unrelated' memory and claims that it is only with the latter that the "Australians ... provide an unmistakable example of divergent evolution" (1931, p.308).

Based on the findings of both these tests and, perhaps, reflecting the prevailing attitudes of different eras, his writings indicate a gradual increase in his appreciation of Aboriginal intellect. Hence, in 1933, he wrote that: "Available evidence with regard to Aboriginal mentality seems to point indubitably towards a somewhat general inferior ability as regards abstract intelligence and the capacity to deal with abstract symbols of thought. This incapacity is probably directly related to an inferior auditory rote memory" (p.36). But in 1966, he states in more moderate terms that the "Australid by

all the evidence that is available is very far from being low, degraded or defective in intelligence" (1966, p.47). Despite this, however, he maintained throughout his writings that the mental development of Aborigines was inferior to that of Whites and continued to hold the view, which he expressed in 1933, that "... the Aborigines were, as a racial group, inadaptably to our civilization" (p.33).

But the significance of Porteus' work to our understanding of Aboriginal cognition is somewhat limited. Although important for its wealth of cross-cultural comparison and for its pioneering role in the development of modern psychometric techniques in the assessment of Aboriginal cognition over half a century, it suffers from a lack of conceptual precision and theoretical foundation, and from conclusions that appear disproportionate to the results obtained and inconsistent with the claims he makes for his tests.

His distinction between 'intellect' and 'practical intelligence', for example, is somewhat arbitrary and unclear. With the qualification that "... mental brightness ... is not synonymous with intelligence", he claims that, rather than assessing intellect, the Porteus Maze measures practical intelligence, "... a single complex of mental traits clustered around the capacity of mental alertness and planning" (1960, p.195) that "... are much more fundamental to survival than scholastic educability" (p.192). More specifically, he claims that it helps to fill in the gap in the assessment of "... persistence, prudence, planning capacity, foresight, consistency of purpose and the ability to set up and abide by self standards of behaviour" (1965, p.170). He fails to make clear, however, how such capacities as 'prudence', 'forethought' and 'planning' are unrelated to 'scholastic educability'; or how 'mental alertness' is different from 'mental brightness'.

His claims for his test, although extensive, reflect this lack of clarity. For example, he argues that "The Maze is far from being a general intelligence test" (1965, p.164), yet he uses its results to indicate that Aborigines have a lower level of mental development than Europeans and claims that "... as a measure of adaptability ... these results should effectively dispose of the idea that improved living conditions ... are mainly responsible for better intelligence. Our evidence clearly points in the other direction" (1965, p.179). Although the implication is there, it is not this 'evidence' which he uses to support his conclusion that Aborigines are unable to adapt to Western society, but characteristics of temperament, which he claims also are measured by the test.

His reticence actually to state that his test assesses general intelligence is not shared by later authors who suggest that it may form a valid cross-cultural measure of 'g' (David and Bochner, 1967). Porteus (1917) himself points out that it correlates highly with the Binet and Simon. He also claims that it "... is one of the most significant measures for the diagnosis of mental deficit" (1966, p.50) and notes its value in detecting differences in mental performance due to lobotomies, vitamin B deficiency, debilitating illnesses such as hookworm, or prolonged use of tranquilizers. Further, he argues that as regards the question of "... racial differences in mentality, the Test has been the means of contributing important, if not crucial, evidence on the subject" (1965, p.180), and, as noted previously, he uses its results to compare and grade racial groups according to their 'mental differences'.⁽¹⁾

(1) An additional claim which he makes for his test is that it "... differentiates well between the socially maladjusted and the well-adjusted" (1966, p.50).

Porteus also used the results of his test to claim that "... the period of mental development in Aboriginal children is comparatively short" (1917, p.38). In support of this conclusion, he noted that many teachers describe a deterioration in the school performance of Aboriginal children generally at about the age when the prepubescent period "... is succeeded during early adolescence by a period in which the common racial characteristics of indolence, shiftlessness, and lack of foresight become apparent" (1917, p.38). Fry similarly argued that the "... consensus of opinion of the earlier observers was that the aboriginal develops to the standard of intelligence of a child of twelve to fourteen years of age and there stops" (1935, p.355).

In his earlier studies, except when 'politically' inadvisable, Porteus excluded older subjects from his testing programmes because their performance was generally so poor and they took too long. But in later years, he and his colleagues similarly suggest, on the basis of Maze Test performance, that Aborigines experience comparatively early 'geriatric decline'. He and David (1966), for example, 'tentatively conclude' from their research "... that the fourth decade of aboriginal life is marked by a decline in the abilities tested by the Maze and that a further drastic diminution of ability can be expected to occur in the succeeding 20 yr., reaching by the end of this period the extremely low level of 7 yr." (p.82); and that: "We must ascribe the deficits of the aged to the ills of advanced senescence, which began in their cases at an earlier period and proceeded at a faster rate than is the case with non-Aboriginals" (p.85).

In another paper, he and his colleagues hypothesise that "... 'old man government' could be effective in diminishing the initiative of the younger individuals and thus arbitrarily restricting

opportunities for adaptive behaviour such as planning and invention" (Porteus et al., 1967, p.4). Elaborating, they argue that: "If old age sets in earlier and proceeds at a faster tempo, it is obvious that geriatric decline is an additional handicap that may go far to stifle enterprise and thus may underlie the general cultural backwardness or inferiority [of Aborigines]" (p.6).

Often, however, the evidence used by Porteus to substantiate his position was highly selective and somewhat 'thin'. In support of his contention that an early limit occurs in the mental development of Aboriginal children, for example, he cites three sources of evidence and concludes that: "Although the number of cases involved is, in each case, too small to justify positive conclusions, all three of the investigations cited points in the same direction" (1933, p.32). This evidence includes cranial volume measures, which indicate that Aborigines have a smaller brain capacity than Europeans, but which, as noted previously, generally have been rejected by psychologists as valid indicators of mental capacities; Maze Test scores which were found to deteriorate rapidly from about eleven years of age onwards, compared with White Australian norms (Porteus, 1917, 1931; Piddington and Piddington, 1932); and Fry and Pulleine's (1931) finding of "... a superiority of scholastic attainment by the senior boys with white blood over their full-blood companions" (Porteus, 1933, p.32).

But Porteus fails to mention in his writings, the Piddingtons' observation that: "The performance of the full-blood children was higher than that of the half castes, being slightly higher than the white average" (Piddington and Piddington, 1932, p.357), and years later, he and David similarly discount the "... surprising finding that there was no widespread disparity between full-blood and

part-Aboriginal adolescent groups" of a later study in their respective test performances (Porteus and David, 1966, p.85).

The conclusions of Porteus and his colleagues linking 'advanced senescence' with cultural 'inferiority' suffer from similar limitations. They suggest that the comparative longevity of Whites compared to Aborigines enables a longer period of 'mental productivity' and therefore may be instrumental in social 'advancement'. They also note that fewer Aborigines than Whites are capable of "... more than normal resistance to geriatric deterioration" (1966, p.84) and imply that this may be related to lack of forethought and prudence, which, according to Porteus, is measured by the Maze Test.

They make no mention, however, of the increasing average lifespan of Europeans following improvements in their medical and nutritional conditions, nor do they state that European society, unlike Aboriginal culture, was dynamic and future-orientated, even when life expectancy was shorter. They do agree that health and nutritional factors may affect test performance, but regard such influences as minimal in relation to the performance of Aboriginal subjects and argue that aged Whites and aged Aborigines are similarly disadvantaged with regard to lessened sensorimotor and visual acuity, and unfamiliarity with the tests. By so doing, they discount the effects of culture differences between both groups and ignore the higher incidence of illness and poor nutrition among their Aboriginal subjects which they had noted in the introduction to their study. When discussing their results, they also failed to refer to the highly unfavourable testing conditions and their adverse effects on Aboriginal test performance, which they similarly had noted in their introduction.

Indeed, a major criticism of Porteus' work that affects the validity of his results in his cross-cultural studies and the utility of his conclusions, is his under-estimation of the effects of culture on test performance. Hence, although acknowledging that: "Familiarity with Whites ... was reflected in a different test score" (1965, p.179), he considers this a minor influence and generally plays down environmental influences, except in so far as they contribute indirectly to a process of 'selective survival'. In contrast, Kearney (1973), in his review of early psychometric studies of Aboriginal cognition, concludes that the "... studies reported by Porteus on Aboriginal ability show a close relationship between the mental age of the subjects and the degree of European contact they have experienced" (p.23).

Support for Kearney's viewpoint can be found in other 'minor' influences noted by Porteus. Included in the high scoring, central Australian groups (relative to North West Australian groups) centred on Hermannsburg, for example, were "... a small group of Luritcha who were quite unfamiliar with pencil and paper" (1966, p.51), but the majority comprised Arunta, a tribe which "... has been under the tutelage of missionaries for almost 90 years" and which contained comparatively high numbers of water-colour painters and trained workers (Porteus, 1966, p.52). A similar contributing cultural influence to test performance that may have favoured Aboriginal men over both Aboriginal women and some other ethnic groups, is indicated in his observation that: "The appearance of a Maze test would occasion no surprise to a Central Australian adult male ... its similarity to decorative patterns familiar to him on his sacred objects and his most valued tools would

predispose him favourably in considering the Porteus Maze as being worthy of his earnest attention" (1966, p.52), as well as familiarising him with the general concept of a maze pattern.

Such criticisms, which challenge the cross-cultural validity of his tests, are not new. Although agreeing with Porteus' overall conclusion that Aborigines have inferior mental abilities to those of Europeans, Fry (1935) points out that tests such as the memory tests employed by Porteus "... are not only tests of rote memory but also tests of attention" (p.357). He suggests that although interest may have been attracted by the novelty of some tests, it was not necessarily accompanied by a desire to do well on the test. Consequently, he doubted that "... a defective rote memory was the basis of the native's inferior ability" (p.356). He argued also that the distinction made by Porteus between associative and unrelated memory was artificial. Similar criticisms of the cross-cultural utility of the Maze Test also were made. Based on their observations that 'bush natives' experienced difficulties both in handling and using a pencil, and in understanding fully the requirements of the test, the Piddingtons concluded that: "Such tests ... are not suitable for application to aborigines who have had no schooling" (1932, p.358). Clearly, both the techniques and conclusions of Porteus suffer from substantial limitations.

2.5.2. Other Psychometric Studies:

He and his colleagues were not the only researchers to use psychometric methods in the assessment of Aboriginal cognitive skills. As early as 1939, Fowler (1940) conducted a testing programme in the

Gascoyne area in the north of Western Australia. His expedition hoped to establish that the tests they administered "... were more suitable for working with Aborigines than those previously employed, and to see how far the results so obtained confirmed the low estimate of the level of the intelligence of the Australian aboriginal previously made by other investigators" (p.124). Fowler found three 'performance' tests to be useful (Alexander Passalong, Ferguson Form Boards, and Cube Construction) and concluded that their "... results in general show average levels of intelligence similar to those already obtained by the other investigators" (p.126), but warned that averages mask a "... very considerable spread in the performance of the testees" (p.126) and that "... some natives have intelligence of a high degree", while "... manual dexterity appeared to decrease rapidly with age" (p.127), thereby depressing averages.

Continuing in Fowler's footsteps, McElwain⁽¹⁾ and Kearney (1970) mounted perhaps the most comprehensive recent attempt to develop a test battery suitable for the assessment of the cognitive abilities of Aborigines, with their development of the Queensland Test. This Test represents a modified version of a test battery designed to predict those Papuans and New Guineans who were unlikely to master a basic infantry training course for the Pacific Island Regiment (Ord, 1959). Use of the test successfully reduced the number of ultimately rejected candidates from about 20% to about 2%. From over one hundred tests "... known to be valid measures of cognitive ability in a European context ... only five or six were valid to a satisfactory degree in predicting the capacity of Aborigines to acquire European

(1) McElwain was one of Fowler's research team.

type skills" (McElwain and Kearney, 1973, p.46). These include the Knox Cube Imitation Test, Beads Test (rote memory), Alexander Passalong Test, Form Assembly Test, and Pattern Matching Test (spatial ability). The Queensland Test was administered to over one thousand Aboriginal children and adults. They included representatives from groups that had either low, moderate or high contact with European society. McElwain and Kearney (1973) conclude from their testing that: "Aboriginal groups are inferior to Europeans [in test performance] and in approximately the same degree as they have lacked European contact" (p.47), a view supported by later researchers using a different approach that will be discussed later in the Chapter (de Lacey, 1969; Dasen, 1970).

McElwain and Kearney (1973) propose a model which suggests that Aboriginal test performance tends to be lower because genetic influences on performance are not reinforced by environmental contribution to the same degree as for White Australian children. In addition, the interaction between genetic and environmental influences may contribute less to their test performance than it does to the performance of European children. Unlike their European counterparts, for example, genetically well-endowed Aboriginal parents may be unable or unwilling to provide their children with a home environment that facilitates successful test performance. Genetic influences on the variance in performance for both groups, however, were thought to be the same. A study by Kearney (1967), for example, found no significant correlation between test performance and the proportion of Aboriginal or European descent of a group of 120 Palm Island Aboriginal children.

In contrast to the etic approach of McElwain and Kearney, Kearins (1976) has adopted an emic approach to the assessment of Aboriginal abilities. Rather than focusing on European-type skills and whether or not Aboriginal children have them, or are capable of acquiring them, she examines Aboriginal cognition 'from within'. Based on the assumption "... that environmental pressures lead to the selection of characteristics which may be behavioural, 'cognitive', and sensory (as well as the more obvious physical adaptations) [and that] such characteristics could be identified (and measured) in the Australian Aborigine" (p.200), she attempted to assess cognitive characteristics of western desert Aborigines that would assist their capacity for survival. Supporting Fry and Pulleine's (1931) early finding concerning visual acuity, she found that Aboriginal children scored significantly better on visual memory and visual sensitivity tests than did European children. But although her approach offers fruitful avenues for a more complete understanding of some dimensions of Aboriginal cognition, the implication of her findings for the capacity of Aborigines to compete effectively in modern society is unclear. Similar uncertainty accompanies the utility of findings reported by Sheehan (1976) of superior performance by some groups of Aboriginal children over European children on tasks involving eidetic imagery.

Adopting a contrasting and not strictly a psychometric approach, Milliken (1970) reports a series of studies of Northern Territory Aborigines "... aimed not at assessing innate capacity ... but at ascertaining the nature of their performance on test instruments which give an indication of educational progress and which predict, in some measure at least, the capacity of the person to cope with the skilled manual, conceptual, problem solving and organisational jobs of our social system" (p.4). The tests consequently tended to be

achievement rather than 'aptitude' gauges, and represent an emic approach from a European perspective. Although Milliken's results demonstrate the overall poor performance of Aboriginal children on such tests in comparison to Australian norms, they also indicate the improvement that accompanies increasing familiarity with the tests and training in the fields tested. In so doing, they highlight the ethnocentricity of such tests and the difficulties with administering them to Aboriginal subjects. Like the psychometric gauges noted previously, their predictive validity for the school performance of Aboriginal children is unsubstantiated, except in so far as Aborigines tend to do poorly both on the tests and at school.

Clearly, there are limitations in both emic approaches. Milliken's emphasis on acquired knowledge and skills directly relevant to schooling tells us little about potential to acquire them. Similarly, skills fostered in the cultural milieu of Aborigines, such as visual acuity and memory, noted by Kearins, may have little bearing on potential academic performance. But the etic approach also is limited. Environment plays such a crucial role in test performance that its distorting influence in cross-cultural comparisons may prove impossible to neutralise or even to equalise.

Nevertheless, as noted in Chapter 1, the acquisition of European-type skills, by culturally different children experiencing the pressure of modern Australian society, remains a priority if they are to obtain the means for overcoming disadvantages they may otherwise experience. Encouraging skilful use of language (especially in Standard English) and logical thought, therefore, are likely to continue to be important objectives of the Australian educational system. Consequently, the assessment of these skills in children from various backgrounds continues to be crucial.

2.6 MODERN CONCEPTS OF COGNITION

Fortunately, concepts that have greater theoretical solidity than the traditional concept of intelligence, and methods that allow for greater flexibility in cross-cultural studies, have begun to emerge. In particular, the developmental psychology of Jean Piaget stands out. Not only has he changed profoundly the way in which 'intelligence' can be conceived, but his 'clinical' approach enables greater freedom during assessment procedures. In addition, his emphasis on the interaction between a growing child and its environment has unlocked some of the mysteries concerning the way in which particular abilities appear to develop. As his theory has been well summarised by several authors (Flavell, 1963; Ginsberg and Oppen, 1969), there is no need to repeat their efforts here. Nevertheless, it is important to discuss briefly some of its more important features, as it forms the basis of the third phase in studies of Aboriginal cognition referred to at the beginning of the Chapter.

2.6.1 The Piagetian Model:

In essence, his theory represents an attempt to answer a philosophical question with a biological model (implied by his notion of genetic epistemology), and it is this orientation that both provides his theory with its strength and exposes its weakness. In broad terms, the question he asks is, 'How does a human organism acquire knowledge of its environment?'. However, he interprets this question as asking, 'How does logical thought develop in human beings?'. Critics claim that such a restricted focus provides a distorted perspective that may underestimate the importance of alternative modes of thought in the adaptive process (Price-Williams, 1975). They argue also that his

assumption that all human groups follow an identical pattern in their development of logical thought is unwarranted, and not supported by the evidence from cross-cultural studies (Dasen, 1977). In addition, despite his adoption of biological concepts to answer the question he poses, his model remains 'psychological' and therefore abstract. Consequently, the relationship between his postulated cognitive structures and underlying biological realities is unclear.

Nevertheless, logical thought provides an important key to contemporary academic success, and Piaget's theory offers a powerful model for understanding its development. According to Piaget (1950), 'intelligence' is not simply a fixed product of genetic endowment or of genetic and environmental interaction, but a continuous process of adaptation involving the development of logical thought. Hence, it is dynamic rather than static. The question of whether genetic or environmental influences are of greater importance therefore is peripheral to his main concern, which is their interaction. How, then, does the interaction between a child and his environment produce intelligent behaviour?

A key concept utilised by Piaget in an attempt to answer this question is 'equilibration' (Piaget, 1950). In his view, the human organism seeks to maintain an internal homeostatic cognitive balance between the information it has stored and that which it acquires. It does this through the complementary process of assimilation and accommodation. When presented with a stimulus, a child seeks to interpret it according to an existing array of cognitive structures (assimilation). But if these structures are incapable of accounting successfully for the sensory input, they are restructured (accommodation) to make them more compatible with the new input,

thereby enabling its assimilation. In Piaget's view, then, intelligence is a continuous process of adaptation in which the organism oscillates between assimilation and accommodation. Its function is the achievement of increasing coherence between an external reality and the organism's internal reconstructions of it.

A crucial ingredient of the Piagetian model of intelligence, therefore, is the concept of structure (Piaget, 1970). According to Piaget, the human organism has an intrinsic need to impose order on the information it receives from the environment. It does this by organising and co-ordinating the actions required of it for successful interaction with the environment. Progressively, as these actions become internalised and reversible, they form logical 'operations' which are co-ordinated with other operations to form integrated systems or operational 'groupings' (Piaget, 1953).

Underlying these groupings are cognitive structures or 'blueprints' referred to by Piaget as 'schemes' or 'schemata'. In operative, as distinct from figurative thought,⁽¹⁾ these structures act as filters through which sensorial information about environmental realities is processed as it becomes transformed into 'knowledge', or neuro-physiological representations of these realities. Some, such as sucking or grasping, are present at birth, but others are not. As the child matures and interacts with his environment, they undergo a constant process of renewal. Eventually several qualitatively different periods in the development of logical thought emerge.

(1) Piaget differentiates between schemes and schemata by relating schemes to operative thought which seeks to construct mental transformations of reality; and schemata to figurative thought which seeks to construct mental replications of reality.

Piaget has identified four such periods: sensorimotor; pre-operational; concrete operational; and formal (or propositional) operational (Berlyne, 1957; Sahakian, 1976). They reflect a child's movement away from egocentric, sensorimotor interactions with his immediate physical environment towards decentred, abstract logical operations employing symbols.

During the sensorimotor period, the infant progresses from a preoccupation with his own body during the first seven to nine months, to an awareness of the independent existence of the world around him. He does this by learning to control and co-ordinate his motor activity as part of a process of acquiring a practical understanding of his environment through interacting with it. His concept of causality, for example, emerges as he becomes aware of the consequences of his own actions. At the same time, he acquires an awareness of the temporal sequence of events and therefore of time. He also acquires a sense of placement in space and with it an awareness of the permanence of objects within it (Piaget, 1936).

Between eighteen months and two years, these acquisitions culminate in the emergence of new structures that enable the child to internalise his actions by representing them with symbols, thereby increasing considerably his adaptive potential. Language is perhaps the most important symbolic system that he acquires, but it is not the only one and is accompanied by other capacities such as symbolic play, deferred imitation or the invention of fiction. Despite this advance, concepts acquired during this period tend to be incomplete and often are illogical, for the child continues to rely heavily on perceptual cues; is dominated by egocentrism; and is incapable of reversing his internalised 'actions'. Consequently he tends to 'fixate' on limited

dimensions of his perceptual field and does not explore the entire stimulus complex. He is thus capable only of attending to states at the beginning or end of a transformation, but not on the process itself.

True operational activity (logical thought) is not attained until the child is aged from seven to eleven years. During this period he acquires an understanding of the reversibility of many transformations, especially those involving reciprocity or inversion. Concepts of conservation of quantities such as substance, weight, volume and length therefore become possible. Important additional operations that develop throughout this period are seriation and classification (or class inclusion). A major limitation of the child's thought during this period, however, is its dependence on what is concrete. It deals with facts verifiable through the senses, rather than with abstract hypotheses. The child's logic is limited, therefore, to tangible problems of the present, which can be dealt with in isolation only, and not through the application of principles emanating from general theories. Logic, consequently, has no validity beyond an immediate concrete context and to this extent remains bound to perception.

When an individual is between eleven and fifteen years of age, a reconstruction again occurs which increases both the scope and power of his thinking capabilities. It enables logical thought to break free of perceptual constraints and to accept the validity of logical argument, regardless of the assumptions upon which it is based. As the child's thinking becomes abstract and symbolic, he acquires the potential for dealing with all classes of logical problems. Thus he is able to deal with problems that are entirely hypothetical (or propositional) and, hence, can consider possibilities, generate hypotheses and draw conclusions which he can verify empirically. Compared to a

concrete operational child, an adolescent in the formal operational period also can deal more effectively with proportions, combinations and conservation of movement. From this point on, the structure of his intellect varies only quantitatively rather than qualitatively.

Although not 'discovered' by English-speaking psychologists until the 1950s, Piaget's work has extended over half a century and has generated massive research and much criticism. His methods and writing style in particular have been criticised widely. He has been accused of failing to make clear many of the assumptions upon which his conclusions are based; of not being precise and consistent when defining and using new terms; and of not integrating sufficiently well the material he presents (Sahakian, 1976). He also has been criticised for employing insufficient controls in his 'clinical' method; of drawing conclusions from inadequate samples; and of not using sophisticated techniques in his analyses (Berlyne, 1957). As many of his conclusions were based primarily on keen observation of his own 'atypical' children, and limited samples of Genevan school children, questions concerning the universal applicability of his theory also have arisen.

Many of these criticisms have been tempered as Piaget has continued to develop his ideas, refine his terminology and, with the aid of Inhelder, improve his experimental procedures (Morrish, 1967). For example, early criticisms, that Piaget made the unwarranted assumption that a child's level of thinking could be identified with his ability for verbal expression (Hazlitt, 1930), have been overcome, to some extent, as tasks requiring non-verbal responses have been devised. Confirmation of Piaget's findings, by other researchers working with Western children, also have played an important role in supporting his model (Elkind, 1961a, 1961b, 1964).

Questions concerning the universal applicability of Piaget's theory have not been answered so readily, however. In his review of cross-cultural studies on the topic, Dasen (1972) tentatively concluded that the rate of cognitive development varied across cultures, with some groups demonstrating quicker, and some slower, development than the European children studied by Piaget; that the sequence in which similar operations bearing on different contents (horizontal décalages) were acquired, was not invariable; that formal operations were not evident in all cultures; and that concrete operations were not evident in all individuals in all cultures. As Dasen points out in his later book (1977), however, interpretation of these and later results is difficult as complex factors appear to be involved. As with intelligence tests, performance on Piagetian tests may or may not be indicative of an underlying cognitive competence.

In particular, Dasen points out that the influence of culturally or educationally transmitted knowledge remains the least investigated of the four major influences on cognitive development described by Piaget.⁽¹⁾ The place of formal logic in the structuring of such knowledge is unclear, however (Parsons, 1960), leading some authors to challenge the assumption made by Piaget that logical thought is an 'inevitable' outcome of adaptational pressures. Greenfield (1976), for example, has suggested that Piaget's model simply describes the development of rational, decentred thought ideally attributed to Western scientists. Development in other cultures, she adds, may be directed towards alternative 'end states' about which little is known. Price-Williams (1975) similarly suggests that different modes of thought may develop in parallel across cultures, each with its own set

(1) The other three are: (a) Maturation; (b) Equilibration; and (c) Interpersonal interaction (Piaget, 1974).

of rules, with some being more functional than others in particular contexts, but with none being intrinsically inferior. The apparent lack of formal operations evident in some cultures consequently may not represent retarded development so much as greater functional utility of alternative lines of development. In some cultural milieux, for example, human adaptation may be better served by apparently non-rational, magical thinking, 'altered states of consciousness', or the development of alternative cognitive structures, the nature of which have yet to be determined (Dasen, 1977).

An alternative explanation for the cross-cultural variations in performance noted by Dasen focuses on the nature of the tasks that were assessed. Many studies follow directly the leads given by Piaget's (and Inhelder's) own work; but as Parsons (1960) has pointed out, Piaget investigated only a limited range of logical relations, and consequently it is not certain how children will respond to problems quite different from those he posed. As with intelligence tests, the material content of the tasks also may be a source of difficulty. As early as 1930, Hazlitt criticised Piaget for paying insufficient attention to the subject matter of thought, while focusing on its process. She argued that it was unwarranted to assume that a child could generalise his capacity to solve one task, to similar tasks with different content.

Both these warnings have particular relevance for cross-cultural research, for clearly the nature of operational activity, the contexts evoking it, and the materials involved in its exercise, are likely to show greater variation across cultures than within a single culture. However, although echoing similar difficulties concerning cross-cultural studies of intelligence, noted previously, these problems are

less likely to be insurmountable, owing to the greater flexibility of Piagetian over traditional psychometric methodology. Dasen (1977) notes, for example, that in recent years some researchers have made use of the language, concepts and materials of the cultural groups they are studying, as well as specially trained local testers, well versed in cultural subtleties associated with the test situation.

2.6.2 Potential, Competence and Performance:

Dasen also emphasises a necessary distinction in studies of cognition between competence and performance. Highlighted by Chomsky⁽¹⁾ in his analysis of generative grammar, this distinction was rapidly adopted by several cognitive theorists (Flavell and Wohlwill, 1969; Cole and Bruner, 1971) and, along with Piaget's formulations, forms the basis of a conceptual model offered by Nurcombe (1976) which he calls, 'Potential, Competence and Performance'.

According to Nurcombe, the human organism inherits a range of biologically based potentials, some of which are species specific. In particular, he stresses man's unique adaptive potentials in the fields of communication and tool use that may have evolved in response to his limited physical capacities and the advantages offered by group life. These include the potentials to transform sensation into perception; to form representations of these perceptions and subsequent abstractions with the aid of symbols (especially language); and to manipulate logically these internal representations using processes which have their roots in the child's initial physical interactions with the external environment.

(1) Chomsky's work is discussed in Chapter 3 (3.4.3).

When these potentials are realised, the outcome is a profile of competencies. The expression of these competencies in the form of overt behaviour is what constitutes performance, and it is performance that is evaluated in tests assessing different abilities. Reflecting Piagetian influences, Nurcombe describes the realisation of potential to produce competence as a diachronic process involving three factors - maturation, equilibration and environment. Maturation refers to the biologically-based direction of an organism's development. The interplay between neurophysiological growth and experience leads progressively towards decentration. Equilibration, as previously indicated, is the fundamental process underlying cognitive adaptation and growth involving a dynamic balance between accommodating to, and assimilating new information.

The environment provides both the stimuli for the individual to interact with, and the sociocultural emphases directing and reinforcing these interactions. It plays a role both in the realisation of potential to produce competence, and in the expression of competence to produce performance. In Nurcombe's words, it determines "... which of the potentials will be actualized, to what degree they will be developed and in which perceptual and affective contexts the competence will be utilized" (p.211). He adds that the environment also influences the mode in which competencies are expressed.

As with Dasen (1977), de Lacey (1976, 1977a) and others, Nurcombe draws on Berry's (1974, 1976) model of ecocultural functionalism to elaborate on the nature of environmental influences that may produce variations in the performance of culturally different groups. Adopting a probabilistic and culturally relativistic position, Berry argues that in the first instance, individuals and groups must adapt

to the ecological pressures they face. They are assisted in this, he suggests, through the development of 'cultural aids', designed to meet these ecological demands and manifest in the form of social structures and socialisation practices. In turn, these mediating influences contribute to the development of specific adaptive behaviours. Consequently, Nurcombe (1976) argues, culturally different groups are likely to develop varying profiles of competencies which find expression in culturally relevant ways when presented with culturally appropriate cues.

Clearly, as Dasen (1977) notes, Piaget appears to have underestimated the importance of cultural differences in determining the nature of the 'end product' of cognitive development. Despite its limitations, however, his theory continues to offer fruitful insights into the nature and development of cognitive competencies favoured in much of Western society. Assisted by conceptual and terminological refinements such as those offered by Nurcombe and Berry, therefore, it remains an important tool for understanding the nature of Aboriginal cognition.

2.7 ABORIGINAL COGNITION

Marion de Lemos (1966) pioneered the use of Piagetian tests with Aboriginal subjects while undertaking research for her Ph.D. thesis. During 1964, she tested 145 Aboriginal children aged from eight to fifteen years who were attending mission schools at Elcho Island (N=65) and Hermannsburg (N=80) in the Northern Territory on tasks involving conservation of quantity, weight, volume, length, area and number. She also administered tests of conservation of quantity and length to about thirty-seven unschooled children from Elcho Island

and twenty-seven unschooled adults from Hermannsburg. A subgroup of twelve Aboriginal women at Hermannsburg also were given a 'choice' test involving conservation of quantity.

De Lemos (1969a, 1969b) concluded from her results that, although the steps in acquiring concepts of conservation were similar for both Aboriginals and Europeans, the sequence in which they were acquired varied. Quantity and weight in particular were not always conserved by Aboriginal children in the order postulated by Piaget, and they conserved area somewhat later. Echoing Piaget to some extent, de Lemos also concluded that Aboriginal children lagged behind European children in the rate at which they developed conservation concepts and noted that many individuals in her study, both schooled and unschooled, did not develop the ability at all. Although acknowledging that environmental influences may be important, she suggested, on the basis of the superior performance of part-Aboriginal children over full-bloods at Hermannsburg, that genetic factors may be placing limits on performance.

As part of the research for his own Ph.D., Dasen (1970) repeated de Lemos' study. But he found neither the quantity-weight reversal that she did, nor any significant differences in the performance of part and full-blood Aboriginal children at Hermannsburg. His study investigated a wider range of cognitive characteristics of Aborigines than was the case with de Lemos, however. In addition to tests of conservation (quantity, weight, volume and length) and seriation, he included tests that sampled spatial abilities and susceptibility to illusions. His sample comprised one hundred 'high-contact' Aboriginal children from Hermannsburg, six-five 'low-contact' Aboriginal children from Areyonga in Central Australia, and eighty

European children living in Canberra, all of whom were aged from five to sixteen years.

Dasen interprets his results as confirming de Lemos' finding that the process of operational development in Aborigines is similar to that in Europeans, but that the rate of development in Aborigines is slower. His non-confirmation of her conclusions concerning genetic limitations on performance, however, is reinforced by his finding that the operational performance of the 'high-contact' Aboriginal group is superior to that of the 'low-contact' group, indicating that environmental influences play a crucial role in determining their performance. A follow-up study of eighty Aboriginal children at Hermannsburg, sixteen months later, demonstrated the reliability of his results (Dasen, 1973). Dasen also notes that, unlike Europeans, the Aborigines he studied appear to acquire spatial concepts before they acquire logico-mathematical concepts, and suggests that this may reflect the environmental press they experience. Expanding this view in a later paper (1975), he argues that the relative performance of his Hermannsburg sample and comparison groups of Africans and Eskimos on selected spatial tests, lends support to Berry's (1974) ecological functionalism hypothesis. The results of his conservation tests were less clear.

Another doctoral thesis completed at about the same time as Dasen's also demonstrated a link between the cognitive performance of Aboriginal children on selected tests and the milieu in which they lived. In this study, de Lacey (1969) compared four groups of children, two White and two Aboriginal, aged from five to fifteen years, on four tests of classificatory ability. The White groups were selected in Sydney on the basis of their father's occupation with eighty children from Granville comprising the low-socioeconomic group and sixty

children from Pymble comprising the high-socioeconomic group. The Aboriginal groups varied according to an index of contact with European society that de Lacey had devised (de Lacey, 1970a). The high-contact group comprised sixty-five children from Palm Island and thirty-four from Townsville. The low-contact group were sampled at Arukun (N=63) and Weipa (N=23).

When the test performances of both Aboriginal groups were compared, the high-contact group's performance was found to be superior. Similarly, the high-socioeconomic Europeans demonstrated significantly better performance on the tests than did the low-socioeconomic group. Differences in performance between the low-socioeconomic European, and the high-contact Aboriginal samples were less evident, although there was a trend which favoured the European group. When the 'very high-contact' Townsville group was considered independently, however, no differences were found between them and the low-socioeconomic European group. This finding was reinforced in a later study in which the small Townsville sample was increased by adding sixty-three high-contact Aborigines from Darwin and Alice Springs (de Lacey, 1971a).⁽¹⁾ In a series of later papers, de Lacey reports surveys of an increasing number and range of samples that provide further evidence for a link between milieu and performance on his classificatory tests; but equivalent performance between low-socioeconomic Europeans and rural town-dwelling Aborigines was not demonstrated consistently (Taylor et al., 1973; de Lacey, 1971b).

De Lacey concludes from his findings that operational development in children, as manifest in their classificatory performance, could be explained in terms of the degree of environmental 'enrichment'

(1) A small number also came from Humpty Doo, a small settlement housing CSR workers about 69 kilometres north of Alice Springs.

they experienced. He considered the middle class a model of such an enriched environment and argued that minority groups had less appropriate and varied experiences and, consequently, were comparatively disadvantaged cognitively and, hence, socially and economically.

In collaboration with other researchers, therefore, he participated in, and later directed, the development and evaluation of an experimental preschool at Bourke, designed to provide 'compensatory' experiences for non-middle-class children in the town. Language instruction initially provided the bulk of these experiences but was complemented later by the inclusion of structured experiences based on Piagetian principles.

Follow-up evaluations demonstrated that such 'interventions' influenced cognitive, as well as language, performance in the short term, but their long-term effects were less clear. Following substantial initial gains in performance on language and classificatory tasks, a decline in performance was evident in subsequent years, especially for some Aborigines.⁽¹⁾ Comparisons of Aboriginal children who attended the preschool, with others who did not, showed a trend for preschoolers to exhibit superior performance on both sets of tasks to Bourke non-preschoolers (de Lacey et al., 1973; Nurcombe et al., 1973; de Lacey and Nurcombe, 1976), but not consistently to non-preschoolers from elsewhere (de Lacey, 1977b). White preschoolers also tended to perform significantly better on the tests than did their Aboriginal counterparts.

Intervention, in the form of programmed experiences and language instruction, therefore, does appear to be influential in bringing

(1) Preliminary findings by Ronan (forthcoming), however, suggest that the effects may be of longer duration than initially was thought to be the case.

about improvements in operational performance by Aboriginal children on certain tasks, but it appears to be insufficient to equalise their performance with that of European children. Other influences appear to be acting to retard any improvements that occur.

Some suggestions as to the nature of these other influences have been offered by Seagrim, under whose supervision the initial work of de Lacey, Dasen and de Lemos was conducted. He collaborated with Dasen and de Lacey in a study of Aboriginal children adopted into White Adelaide families, and has conducted longitudinal and comparative research into the cognitive development of Aboriginal children at Hermannsburg.

These studies have tended to provide additional evidence for a link between the performance of Aborigines on tests of cognition and their degree of involvement with the White community. The Adelaide adoptees, for example, were found to perform as well as high-socioeconomic European children on tests of horizontality, seriation and classification and slightly below them on tests of conservation. The Hermannsburg children, on the other hand, registered performances on each of the tests that were substantially poorer (Dasen et al., 1973). Noting in a later paper that Aboriginal children attending a boarding school at Alice Springs performed at levels in between these two groups, Seagrim and Lendon (1976) conclude that the amount of time spent in the care of White adults was the crucial factor in determining their performance.

This observation supplements Seagrim's (1974) earlier suggestion that a concept of 'Aboriginality' may be emerging amongst Aborigines like those at Hermannsburg, which actively impedes the development of cognitive and literary skills. He argues that,

although the concept has yet to be defined clearly in positive terms, it may be taking the shape of an 'anti-White' statement of identity. Hence the absence of materials and practices that appear to facilitate the acquisition and maintenance of reading and writing skills from the homes of many Hermannsburg families may not reflect illiteracy so much as 'anti-literacy'; for literacy, along with other academic skills, may be perceived by them as belonging to the 'White world', as exemplified by the schools, and hence, as foreign to their own emerging tradition and irrelevant to their needs. Expanding this view, he and Lendon (1976) suggest that the gap between the experiential preparation and requirements of such groups and the demands of White Australian culture may interfere with cognitive development. He proposes a theoretical model in which he stresses the importance of variety and congruency in the experiential backdrop to cognitive development and suggests that integrated traditional Aboriginal cultures are better able to provide such experiences than are groups caught between Traditionalism and Westernism.

Although the empirical data gathered by de Lacey and Dasen do not support this hypothesis, Seagrim's discussion serves as a useful reminder of the problem of identity experienced by many de-tribalised Aboriginal and part-Aboriginal groups, and highlights the importance such influences may have in shaping particular cognitive skills. It also indicates a need to re-examine the contribution of traditional cultures to cognitive development and points to their role in preventing a trend towards what Seagrim (1977, p.375) calls the "intellectual homogenization of mankind". As well, it suggests a need to know more about the situation of non-traditional groups and their accompanying sociocultural and cognitive characteristics, a need which this research is designed to help satisfy.

Seagrim is not alone in suggesting that the potential for operational development in traditional cultures may be underestimated. Bryer (1976), for example, has challenged de Lacey's (1970b) assumption that the ability levels of low-contact Aborigines whom he tested at Arukun can be inferred from their performance on the tests he used. She is especially critical of the Matrices Test he used, arguing that it not only is inappropriate in a cross-cultural setting, but that it also may be invalid as a test of logical operations. She points out that symmetry inherent in its items may provide perceptual clues to its solution, thus obviating the need to exercise logical operations, and notes that Aborigines appear not to attend to symmetry in patterns as do Europeans, and that Aborigines at Arukun may actually prefer asymmetrical patterns. She also suggests that discernment of criterial attributes of particular tasks (such as orientation), even if attended to, may have differential difficulty across cultures. In support of her argument, she reports that, when tested with familiar materials, Arukun subjects demonstrate logical thought required for two-dimensional classifications.

Others, similarly, have stressed the need to avoid conclusions based on ethnocentric assumptions. Nurcombe (1970), for example, studied concepts of causality by asking a sample of Aboriginal children and adults from Elcho Island about topics common to mankind (dreams, life, night, clouds). He concluded that the relative absence of causal explanations may not reflect pre-causal thinking, as suggested by the Piagetian-derived theoretical model he had adopted for his inquiry, but 'paracausal thinking' - an alternative mode of thought, adequately catering to the demands of traditional lifestyles.

By 'putting the shoe on the other foot', a study by Drinkwater (1976a) succeeds in bringing home the point even more clearly. She reports that classificatory strategies employed by Cape York Aborigines are 'advanced', relative to those used by Boston children in another study, as the Aboriginal children used nominal or functional groupings, as opposed to 'perceptual attribute' groupings, more frequently and at earlier ages than did the Boston children. However, her findings are less likely to be accepted by European researchers as evidence for Aboriginal intellectual superiority than as evidence against the validity of the theoretical assumptions upon which such conclusions are based (or some other alternative). Hence, Drinkwater's suggestion that her results may reflect the absence, in Cape York tribal languages, of concepts such as 'colour' and 'shape', which may contribute to 'perceptual attribute' categorisation, is likely to find easier acceptance. Objectivity clearly demands that findings favouring Western children be subject to similar scrutiny, as in Nurcombe's study, and that heed be taken of Cole and Bruner's (1971) warning concerning the dangers of drawing unwarranted inferences about competence from cross-cultural differences in test scores.

It is evident, then, that despite their greater flexibility and theoretical solidity, Piagetian approaches to cross-cultural studies of cognition, like psychometric investigations, are susceptible to accusations of ethnocentricity if insufficient care is taken both to ensure that appropriate procedures and materials are used, and to avoid unjustified judgements about competence from variations in performance. Similar caution is required concerning the assumption that formal operations represent the end point of a continuum, along which most other forms of thought can be placed, thereby condemning them to the status of being less advanced or inferior. At the same time, however,

the competencies required for advanced logical thought should not be attributed uncritically to groups whose cultures may not foster them. Nor should it be assumed that transference from one form of logical thought to another, or of a similar form to different contexts, can be accomplished easily without adequate experiential 'groundwork', even if the motivation to do so exists.

2.8 CONCLUSION

In conclusion, then, this Chapter has traced a progression throughout this century towards greater conceptual and methodological precision in studies of Aboriginal cognition. It commenced with an account of early attempts at assessing Aboriginal 'mentality' by using as indicators such wide-ranging indices as social complexity, morality, sensorimotor activity or cranial shape and size. This was followed by a discussion of the limitations of the concept of intelligence and its accompanying psychometric gauges especially for cross-cultural studies. Finally, the review passed on to Piaget's theoretically more solid description of the way in which logical thought develops, and the need in cross-cultural studies to distinguish between potential, competence and performance. A constant theme throughout has been the inadequacy, ethnocentricity, and theoretical circularity, both of many of the concepts and assessment procedures used in the study of Aboriginal abilities, and of the ensuing interpretations of Aboriginal test performance. In particular, a 'caveat' was sounded, that the close association consistently found between the test performance of Aborigines and their contact with White society may tell us more about the Aborigines' degree of Westernisation than about their potential or existing intellectual competencies. A wide range of conceptual,

perceptual, motivational and emotional processes, for example, may need to be activated and co-ordinated before particular kinds of operational performance are produced.

Nevertheless, Piaget's emphasis on biological-environmental interactions, and Berry's emphasis on psychological-ecocultural interactions, suggest that the content, and hence, to some extent, the nature and level of operational activity are tied to culture. This seems to apply in particular to the forms and flexibility of conceptual manipulations (differentiations and integrations) engaged in by varying sociocultural groups. Specifically, then, the weight of theoretical evidence reviewed in this Chapter suggests that neurologically-coded representations (cognitive reconstructions) of reality comprise the human organism's response to consistent patterns of stimuli with which it interacts, thus indicating that competencies as well as their co-ordinations to produce performance, are tied to sociocultural constraints.

Returning, then, to questions posed at the commencement of the Chapter, it is evident that definitive answers are not possible; but over three-quarters of a century of theoretical refinement and data accumulation have provided a clearer perspective of the issues involved. The assumptions underlying the questions have come more clearly into focus.

Are Aborigines able to adapt to White Australian society? This question implies that they are either willing to, or need to adapt, and covers a far wider range of topics than has been covered in this Chapter. Complex sociological and psychological considerations are involved, not the least being an apparent inability of White society, so far, to adapt to the presence of Aborigines in Australia,

without exposing them to exploitation or violence.⁽¹⁾ As regards the question of Aboriginal acquisition and expression of intellectual skills favoured in large sections of Western society, however, the Chapter does offer some insights.

The answer to the question, 'Are Aborigines able to profit from formal education?' depends on which Aborigines, what is meant by 'profit', and the type of schooling to which they may be exposed. Clearly, the research findings reviewed in this Chapter, and especially those reported by de Lacey (1969, 1971a) and Dasen, de Lacey and Seagrim (1973), and the contradiction by Dasen (1970) of de Lemos' (1969a, 1969b) findings, do not support the contention that genetic constraints place limits on the potential for Aboriginal children to develop forms of competence equivalent to those developed by European children.

The answer to the question of whether Aboriginal children actually possess the intellectual prerequisites for successful school performance is less certain, however, as it is not yet clear what, precisely, these prerequisites are. But the extent to which Aborigines are able, or willing, to demonstrate logical thought on content and in contexts similar to those found in many school environments, appears to be a function of their exposure to White Australian culture. Difficulties in drawing inferences about competencies from performance place constraints on interpretations of the results of studies of Aboriginal cognitive abilities, but more recent and substantial theoretical formulations concerning the nature of cognitive abilities, and the consistency of findings linking Aboriginal performance to their level of contact with mainstream Australian society indicate that both the

(1) Principles that may be governing the sociocultural adaptations of Aborigines and Whites to each other are discussed in Chapters 6 and 9.

development and expression of competencies are linked to culture. At the very least, it now appears certain that the co-ordination by Aboriginal children of competencies and predispositions to produce performance on tasks in contexts and with content pertinent to modern schooling (itself a form of competence) appears to be a function of their level of Westernisation.

Language, especially, has been implicated as playing a crucial role in both the development of cognitive competencies and their expression as performance. It forms the subject of the next Chapter.

CHAPTER 3

LANGUAGE AND ABORIGINES:

THEORY AND RESEARCH

3.1 INTRODUCTION

The shattering impact of Chomsky's (1957, 1965) analyses of the nature and structure of language has altered radically contemporary thinking on the topic, and thrown the field of linguistics into a state of flux. In particular, his work has given new perspectives to controversies concerning the relationship between language and thought. As a result, psycholinguistics is currently one of the most rapidly developing fields of scientific inquiry.

Language, consequently, has emerged as a key issue in the education of minority-group children in the United States, Australia and elsewhere. It is a complex issue that in Australia concerns children whose mother tongue is a non-Standard variation of English, as well as those who do not have English as their mother tongue. In view of its importance in the field of Aboriginal cognition and schooling, the rapidly changing state of knowledge on the subject, and Labov's (1970) criticisms of psychologists and educators for having insufficient understanding of the nature of language, it is considered in some detail in this Chapter.

Children of non-English-speaking parents include migrants such as Puerto Ricans in the United States, or Chileans, Greeks or Turks in Australia, and traditionally oriented indigenous peoples, such as Amerindians or tribal Aborigines. Controversies related to their schooling centre on questions like the following: Would such children benefit more if they were taught initial number and reading skills in their own language, rather than in English? What effects would such a practice have on their overall adjustment, school progress and prospects for

economic success? When and how should English be introduced? And are bilingual children advantaged cognitively relative to their monolingual peers?

Controversies of more immediate relevance to the present study, however, surround the language of children who speak non-Standard forms of English. These controversies are identified in such questions as the following: Does the variation they speak constitute a distinct dialect or a 'debased' form of Standard English? What are the implications of such differences for the educational and, ultimately, economic success of these children? Does the language they use facilitate the articulation, abstraction and refinement of conceptual hierarchies as efficiently as does Standard English?

Before concentrating on such specific questions as they relate to Aborigines, however, broader issues need to be examined to give them perspective and substance. Issues requiring such consideration include: (a) the nature, function and diversity of language; (b) its structure; (c) the relationship between language and thought; and (d) the acquisition of language. Consequently, research relating to 'Aboriginal English' and Aboriginal psycholinguistic abilities is evaluated following a detailed review of important principles and research findings relating to these issues.

3.2 THE NATURE OF LANGUAGE

The word 'language' can be used in a variety of ways to convey a variety of meanings. We may, for example, speak of the 'language of science', or the 'language of the bees', or even the

'language of the deaf and dumb'. Each use of the term has different connotations which consequently make it difficult to define.

According to the Oxford English Dictionary, the word 'language' can be defined as "the whole body of words and combinations of words used by a nation, people or race" or, in a more general sense, as "words and methods of combining them for the expression of thought" (Vol.VI, p.57). Such definitions, however, provide inadequate insights into the nature of language. What, indeed, are words? How are they formed? What governs their organisation? What are the characteristics of language? And what, more precisely, is its function in relation to thought?

A more inclusive and widely cited definition has been proposed by the linguistic philosopher, Edward Sapir: "Language is a purely human and non-instinctive method of communicating ideas, emotions and desires by means of voluntarily produced symbols. These symbols are in the first instance auditory and they are produced by the so-called organs of speech" (Sapir, 1921, p.8). Although the question of whether or not language acquisition is a uniquely human capability is controversial (Linden, 1976), there is little doubt that mankind has exploited it more fully than have other primates, and Sapir's work continues to be amongst the most influential in the field. In elaborating his definition, he considers language from the viewpoint of form and function, and relates spoken forms to other variations, such as written or gestural (Sapir, 1921, 1933).

In the first instance, he argues, language comprises a conventional system of sound symbols (later called phonemes) that are culturally transmitted. Each language has a limited number of such symbols which are used in combination to convey meaning. They are

produced by the 'organs of speech' - the lungs, larynx, palate, nose, tongue, teeth and lips. He refers to them as "so-called" organs of speech because he argues that their role in speech production is secondary to more basic functions such as breathing or chewing. Later authors such as Lennenberg (1967), however, give greater emphasis to their specialised adaptation in human beings for speech production. Other symbolic systems used in communication, such as writing, morse code or sign language, are, Sapir argues, 'symbols of symbols' in that they merely supplement or substitute for sound symbols.

At the biological level, speech production and reception require complex interactions of many physiological systems. Cerebral, auditory, motor and other processes are activated and integrated, he suggests, to form a system of signals that is used by man to interpret the world he experiences. The myriad of individual percepts, experiences or objects within his world are grouped, organised and codified to form concepts, which, when represented by sound symbols or their equivalent, form the basis of this system.

Sapir defines a concept as "a convenient capsule of thought that embraces thousands of distinct experiences and that is ready to take in thousands more" (Sapir, 1921, p.13). He argues that the 'essence' of language lies in the association between such concepts and the symbols used to represent them. Phonemes may form the mechanical basis of language, but the true units of language as a symbolic system lie in the combinations of phonemes that form units of meaning (or morphemes). The "sounds of speech", observes Sapir, "are not the essential fact of language, which lies rather in the classification, in the formal patterning, and in the relating of concepts" (Sapir, 1921, p.22).

Language, however, is made functional as a means for expressing concepts by reason of the rules that govern the way in which the various sound symbols and their combinations are linked together. Although the specific rules may vary, each language has a phonological and a grammatical system. Hence, a universal feature of language is an inbuilt set of 'laws' that enable the organisation of arbitrary sounds into a coherent system of symbols in order to convey meaning.

In summary, Sapir writes: "The fundamental groundwork of language ... includes ... the development of a clear-cut phonetic system, the specific association of speech elements with concepts and the delicate provision for the formal expression of all manner of relations" (1921, p.22).

3.2.1 Functions of Language:

The primary function of language is communication. Consequently it plays a major cultural role in such fields as socialisation, social identity, social interaction and formal education. Hence, it is intrinsically tied to many areas of human activity. It can be used to command, query, threaten, impress, placate, or simply to establish rapport (Bates, 1974). However, it is not synonymous with communication; for language can occur without communication, as happens, for example, with the egocentric speech of a child; and communication can occur without language, as when a dog barks to indicate danger, or a man sighs to indicate boredom.

Human beings continually use language to influence each other's behaviour. A threat or a request, for example, will usually produce a response. Russian psychologists, such as Luria (1961), who view language as a system of signals that operate independently of the 'laws' of classical conditioning, in particular have emphasised the role of language in the regulation of behaviour. In a similar vein, American Behaviourists, such as Staats (1968), who view language itself as a form of 'verbal behaviour', argue that it acts as both a stimulus to behaviour and a response to it.

The symbolic nature of language enables it to serve another, more controversial, but extremely important, function, which will be discussed in greater detail later in this Chapter. This concerns its role in enhancing man's capacity for thought. Although disagreement exists over the question of whether language derives from thought, or thought from language, and over the role of language in such processes as memory, perception, categorisation and concept formation, most authors agree that language facilitates the development of representational and logical thought.

Stork and Widdowson (1974, p.12) have noted several characteristics of language that assist this process and which help distinguish it from other forms of communication. These include:

- (a) Duality - the characteristic of language that enables it to be divided into recognisable units of sound that can continuously be recombined to "construct an infinite number of [meaningful] utterances";
- (b) Creativity - the capacity of a native speaker to comprehend and generate sentences he has never heard before;

- (c) Arbitrariness - the symbols used and the objects to which they refer have no causal connection; and
- (d) Displacement - language is context-free and can therefore be used to refer to objects or events that are not present.

Stork and Widdowson also refer to the self-perpetuating nature of language. By this they mean that the linguistic environment into which a child is born primarily determines the particular linguistic code he will adopt: "The young child listens to the speech around him and develops his own system of communication which he gradually refines and brings nearer to that of adult speakers of the same speech community" (p.13). The language spoken by adults belonging to the same broad 'speech community' varies, however, both with individual and group usage. It is important, therefore, to explore the nature of these differences in order to place in proper perspective the variations spoken by minority groups and to understand controversies concerning their utility as vehicles of thought.

3.3 LANGUAGE VARIETIES

Each distinct language can be conceptualised as a composite of many sub-types. The word 'English', for example, represents a concept that incorporates many sub-varieties and styles of English. A native speaker learns to identify and draw implications from many such sub-varieties, and to use particular types on appropriate occasions. Two broad, overlapping categories that can be identified are:

- (a) language styles - varieties of language used by single individuals on different occasions; and
- (b) dialects - varieties of language based on common usage by particular groups.

3.3.1 Language Styles:

Language styles (or registers) are transitory, in that they are dependent on the social situation in which the speaker finds himself. Joos (1967) has described a hierarchy of five language styles that reflect both the context and purpose of language usage, and the relationship between those speaking and those hearing. They are frozen, formal, consultative, casual and intimate, and represent a gradation from extremely formal and explicit, written forms, through less formal conversation as between adult strangers, to more intimate usage between close friends. Often this trend is characterised by the use of sentences of decreasing length to express similar ideas, as the closer two people are, the more that is implicitly understood and hence the less need there is for background information. Slang or a particular jargon, for example, is usually only appropriate when used by those who belong to similar 'reference' groups. Language styles, then, represent a repertoire of language types available to an individual to meet different social demands.

3.3.2 Dialect:

Dialects reflect more permanent language differences, and may be based on such determinants as age, sex, education, geographic background and social class. They represent variations of a particular language system. However, the distinction between a dialect and an independent language is not always easy to draw, partly because of the difficulty of defining what distinguishes one language from another.

In many respects, distinct languages represent focal areas on a continuum. They show considerable internal variation and often merge into one another, blurring distinctions. Langacker (1973), for

example, notes that the geographic distribution of traditional Australian Aboriginal speech areas can be likened to the links of a chain. Adjacent speech areas are so similar that they would hardly qualify as separate languages and would best be described as dialects. However, if two widely separated areas were compared, and the intervening links ignored, major differences between them would justify their classification as distinct languages.

Even in areas where fairly sharp boundaries can be drawn between different language communities, qualifications are necessary. Many people living in the border area between Mexico, where Spanish dominates, and the United States, in which English is predominant, for example, are bilingual; and many words and expressions are transported from one language to the other. When speakers of radically different languages, such as English and the languages of New Guinea, come into contact, a new form of language, termed 'pidgin', that incorporates elements of both, will often emerge, to function as a lingua franca between the groups. Typically, it will retain a large portion of the lexicon and phonology of the main language from which it developed, but will have simplified syntax (Elgin, 1973). When such a language becomes established as the first language of successive generations, it evolves in grammatical complexity and is described as being 'creolised'. 'New Guinea Pidgin' (or 'Neo-Melanesian'), for example, has been described as a creole language (Laycock, 1970). In some instances, when contact is long and continuous, this process may lead to the formation of a distinct dialect of the language from which it primarily developed, as has happened in Jamaica (Langacker, 1973), with negroes in the United States (Stewart, 1969) and, perhaps, with Australian Aborigines (Flint, 1968).

Often the distinction between language and dialect reflects political rather than linguistic realities. Sapir (1931), for example, notes that, although considered dialects of Italian, Venetian and Sicilian are no less distinct from each other than are Russian, Polish and Serbian from each other. He even suggests that, in a sense, the vernacular languages of Europe could be described as dialects of a common Indo-European language, to which they are linked along an historical continuum. Langacker (1973) concludes that "dialects ... are more a product of our conceptualization and desire for simplification than a natural linguistic phenomenon" (p.52).

Generally, however, linguists prefer to describe as dialects, language variations that have many more similarities than differences. Although dialects may vary in phonology, lexis and syntax, and at times be barely intelligible to speakers of other dialects, most speakers would understand a standard or general dialect. Hence, although the many dialects of English, both within nations (such as the United States and Britain), and between nations (such as Australia, South Africa and India), may be mutually unintelligible, most speakers would understand a form of English described by linguists as 'General English'.

Often one particular dialect will adopt a position of prestige in a language community and will be used as a primary medium of commerce, education, literature and communication via the mass media. People in the higher-socioeconomic brackets, and those with the most formal education, tend to have this standard form as their primary dialect. Speakers of other dialects, however, often experience social discrimination and are frequently described as being uneducated, speaking incorrectly, or as coming from the 'wrong' kind of background.

In France, the Paris dialect has emerged as the prestige or standard dialect. The dialect called 'Southern British English', that evolved in the southern part of England near the commercially and politically important centre of London, has developed a similar role. Its written and spoken forms, known respectively as Standard English and Received Pronunciation, are both widely taken as the standard (Stork and Widdowson, 1974). Similarly, Standard American English derives primarily from the dialect spoken in the northern and eastern parts of the United States. Although variations between such standard forms of English do occur between nations, they tend to be minimal, particularly in written forms, which may form the basis of universally understood 'General English'.

In Australia, comparatively little research has been done on dialectal differences. However, some work by Mitchell (1970) and Delbridge (1970) indicates that, although regional variations are minimal⁽¹⁾ three broad types of Australian English can be identified: Cultivated, General and Broad. Mitchell suggests that Australian English "was in its origins a working class speech" (p.9), that was heavily influenced by Irish and the city speech of south-eastern England. Cultivated Australian, however, is similar to Southern British English. Delbridge concludes from his and Mitchell's research that "girls tend towards Cultivated and General forms, boys toward General and Broad. Cultivated speech correlates significantly with higher occupations, independent schools, and city life" (p.20). Other variations of Australian English, and in particular the version spoken by many Aboriginal Australians, which will be discussed more fully later in the Chapter, also have been noted (Flint, 1968, 1973).

(1) For a light-hearted discussion of regional variations that do exist, see Cunningham (1981).

3.3.3 Restricted and Elaborated Codes:

As indicated from the above, perhaps the most important determinant of dialectical differences, in addition to geographic location, is social class. Much controversy exists, however, concerning both the linguistic status of various non-standard language forms, and their relative utility as vehicles of thought. Is the language spoken by subcultural or minority groups a limited version of the standard form, or a distinct dialect? Further, are speakers of non-standard forms or dialects disadvantaged because of structural deficiencies in these language variations that inhibit the development and exercise of abstract thought? The work of the sociologist, Bernstein (1961) has been cited by psychologists like Bereiter and Engelmann (1966) as evidence that this may be the case; but their views are vehemently opposed by linguists such as Labov (1970), who contends that such language variations are structurally equivalent and therefore are unlikely to affect, differentially, cognitive development.

As part of a study of the background influences on the scholastic performance of middle- and working-class British school children, Bernstein (1961) identified two types of language that appeared to be influential - a 'restricted code' and an 'elaborated code'. The restricted code typifies the speech of working-class children who, according to Bernstein, experience less pressure to verbalise their thoughts and feelings than do middle-class children. It is characterised by a comparatively rigid syntax, with a large proportion of stereotyped colloquial expressions and short, simple sentences in which the active voice predominates. It tends to be more 'concrete' than

the elaborated code, and is thus more likely to be bound by the temporal and spatial characteristics of an immediate context. Consequently, meaning is often provided as much by contextual clues as by language content.

The elaborated code of middle-class children, on the other hand, Bernstein argues, is grammatically more complex and less tied to context. It makes wider use of modifiers and subordinate clauses, and enables greater precision of expression. Consequently, he asserts, it provides greater access to 'universal meanings' that are less dependent on the immediate experience of the speaker. Unlike his working-class peers, the middle-class child is more likely to be able to switch codes. Bernstein argues that such linguistic differences play a part in inhibiting the working-class child's progress at school.

Extending this viewpoint, Bereiter and Engelmann (1966) argue that the language spoken by lower-socioeconomic groups in the United States, and, in particular, the form spoken by many American Negroes, constitutes a 'language deficit' which retards cognitive development. They claim that intensive language training programmes, aimed at teaching these children skills in Standard English, are necessary if the effects of such 'deficits' are to be ameliorated.⁽¹⁾ In support of this view, a series of studies by Kirk and Hunt (1975) (and their colleagues) demonstrated that Standard-English-speaking children were more proficient at certain descriptive tasks than were their non-Standard-English-speaking peers, leading the authors to conclude that non-Standard forms were deficient in semantic content and communicative precision.

(1) In his later writings, Bernstein (1974) disassociates himself from this interpretation of his work.

But as noted above, these views have been severely criticised by Labov (1970). He points out that his own work with Negro children in urban ghettos indicates that these children are not language deprived but 'bathed in verbal stimulation'. Their poor performance in formal test situations is due, he claims, to sociolinguistic rather than psycholinguistic determinants. Hence, in his view, it is more likely an indication of how they respond in situations they regard as threatening than an indicator of their linguistic competence.⁽¹⁾ In support of his view, he contrasts the monosyllabic responses of a ghetto child in a formal interview situation, that would normally be interpreted as indicating a low level of language development, with the same child's enthusiastic, competent use of language in more relaxed surroundings. His observations have led Cole and Bruner (1971) to suggest that psychologists need to re-evaluate the relationship between psychological processes and situational factors and its implications for research methodology, along the lines discussed in Chapter 2.

Labov also argues that the superiority of Standard English over other forms, as a system for dealing with abstract, hypothetical, logically-complex problems, is a myth. He acknowledges that Standard English may offer advantages over other English variations with regard to the explicitness of its surface structure, but stresses that this is distinct from its utility as a vehicle for logical discourse. Psychologists such as Bereiter, he claims, not only have failed to make this distinction, but also have failed to understand the complexities and structures of language in general and of non-Standard dialects in particular.

(1) The distinction between language competence and performance is discussed later in the Chapter (3.4.3).

'Black English', he states, is not an inferior form of Standard English, but a language in its own right, with its own grammatical rules and a structural soundness that is equivalent to Standard English. Double negative constructions or phrases such as 'they mine' that it incorporates, are not poorly connected or illogical word sequences as suggested by Bereiter, he maintains, but grammatical sentences which conform to structural regularities that are different from, but not inferior to, those of Standard English. Hence the underlying logic of both systems is equivalent. He is critical, therefore, of conclusions which attribute cognitive paucity to structural deficiencies in non-Standard-English forms. He also points out that the Standard English of many middle-class speakers tends to be meandering and verbose, and as an illustration contrasts the coherent, logical arguments of a speaker of 'Black English' with the confused, rambling speech of an 'educated' Negro speaker of Standard English.

Labov's criticisms leave many questions unanswered, however. For example, if the surface form of Standard English enables greater precision of expression, does this in turn increase the potential for the speaker to engage in more precise thinking? Can Standard English, with so many features in common with non-Standard forms, be taught effectively as a second language, as Labov suggests it should, or would both forms overlap so much that they interfered with each other? Can the 'decentred' or 'universal' quality of Standard English be acquired and expressed without intensive early language training and much practice, along the lines suggested by the Bereiter-Engelmann programme?

Answers to such questions clearly require a sound understanding, both of cognition generally, and of language in particular. In this regard, Labov's rebuke to psychologists and educators for having

insufficient understanding of the nature and structure of language, or of situational influences affecting its usage, is timely. Hence, before explaining more fully the relationship between language and thought, and reviewing research on the nature of the language and psycholinguistic abilities of English-speaking Aborigines, it is important to investigate more fully the nature of language.

3.4 THE STRUCTURE OF LANGUAGE

Attempts at categorising elements of language and articulating the rules that guide its use have a long history and are currently the source of much controversy among linguists. It is useful, therefore, to survey briefly the main schools of thought and the contributions they have made, in order to gain greater understanding and awareness of what constitutes language. By so doing, deeper insights into current controversies noted above concerning the linguistic status and educational (and cognitive) utility of non-Standard forms of English spoken by minority groups may be obtained. In particular, such a survey may shed light on our understanding of the linguistic competence of Aboriginal children.

Three broad theoretical approaches have been adopted by Western grammarians in their attempts to analyse the structure of language: Traditional, Structuralist and Generative. Differences between them over the question of whether the aims of linguistic inquiry should be descriptive, prescriptive or explanative are reflected in different definitions and emphases. Each approach, therefore, will be examined briefly in order to demonstrate its respective contributions to our understanding of the three main components of language,

the sounds of speech, the system by which they are organised, and the meaning that is attached to them.

3.4.1 Traditional Grammar:

The approach adopted by traditional grammarians has its genesis in the philosophical inquiries of the Ancient Greeks. Building on the work before them, Socrates, Plato, Aristotle and later philosophers, the Stoics, all contributed to the development of our understanding of the nature and structure of language. They attempted to describe the structure of language in philosophical terms. Supported by Rhetoricians (teachers of rhetoric), who were interested in the practical applications of language, they initiated and gradually refined concepts and terminology, and articulated problems that were to influence grammarians until modern times.

The work of a later Greek, Dionysius Thrax, in the first century B.C., was particularly influential. In what Robins (1951, p.36) calls "a masterpiece of brevity and orderly arrangement", he summarised, codified and presented the accumulated knowledge of Greek grammar that had derived both from the early philosophers and from later writers of the Alexandrian period, who analysed grammar independently of philosophy. His treatment of phonology reflected the Greek view of it as a theory of 'letters' and 'syllables'. Words for the most part were accepted as self-evident units of language, and consequently their definition and status received little attention.⁽¹⁾ However, linguistic criteria such as word form or word meaning, as

(1) Aristotle was an exception, in that words were implicitly included in his definitions of nouns and verbs, the only word classes he recognised as forming speech. Inadvertently, then, he defined words as 'having meaning' and as units 'whose parts by themselves have no meaning' or in other words as 'minimal meaningful units' (Robins, 1951, p.20).

opposed to philosophical criteria, were used to group words into eight 'parts of speech' (noun, verb, participle, article, pronoun, preposition, adverb and conjunction). Secondary grammatical categories also had been described. Nouns were subdivided according to gender, case and number, and verbs were subdivided according to voice, mood, tense and number. Although any reference to syntax, the way in which words are grouped to form sentences, is absent from his work, his treatise was used as a standard text until the eighteenth century.⁽¹⁾

Although his work was essentially descriptive, his definition of grammar as "empirical knowledge of the language of poets and prose-writers as generally current" (quoted in Robins, 1951, p.38), with its emphasis on literature, reflected the preoccupation of grammarians with written forms and their failure to distinguish between descriptive and prescriptive (or normative) grammar. For centuries this failure contributed to the persistence of the analogy-anomaly debate. In essence, this debate centred on the questions: "Can the facts of grammar be made more systematic and tidy than they appear to be in observed usage? Or should what is actually observed, however 'anomalous' or unsystematic, be accepted and sanctioned?" (Robins, 1951, p.16). Failure to solve this problem confounded the "empirical knowledge" of grammar with notions of 'correctness' and 'purity' of linguistic forms, and was to culminate with classical grammar taking on the form of a dogmatic set of rules for all languages. Modern debates concerning the utility and status of non-Standard English forms still often reflect this confusion.

(1) This deficiency was later made up for by the work of another Greek author, Apollonius Dryscolus, who similarly was used as an authority, particularly by later Roman grammarians (Robins, 1951).

In accordance with Rome's admiration of Greek culture generally, Roman grammarians attempted to describe and classify Latin by using categories the Greeks had devised for their own language. As both languages were similar, such a transplant was able to be achieved without too much difficulty, and only minor modifications were required. For example, the 'article' which did not exist in Latin was discarded and the 'interjection' introduced. Later Latin grammarians, such as Donatus in the fourth century A.D., and Priscian in the sixth century A.D., cited earlier literary forms as their authority in matters of grammar and deplored what they saw as the linguistic degeneration of the Latin spoken by their contemporaries.

Later European grammarians throughout the early middle ages (approximately from the eighth to the twelfth centuries, A.D.), generally followed suit. Latin enjoyed enormous prestige as the universal language of scholarship and 'culture', and was in daily use as a living language of the Church and of the law. It was considered to be a 'model' language, unlike the 'inferior' and 'degenerate' language forms spoken throughout the time. Grammar, which at that time meant Latin grammar as expounded by Priscian, Donatus and some others, was studied as one of the seven 'Liberal Arts'.⁽¹⁾ Its authority was challenged only on theological grounds for being based on 'pagan literature' rather than on later Latin structures used in the 'Vulgate', an early form of the Bible.

For a time during the latter part of the Middle Ages (approximately the thirteenth and fourteenth centuries, A.D.), the rediscovery of works of the Ancient Greeks and others brought about a

(1) The others were rhetoric, dialect, music, arithmetic, geometry and astronomy, all of which were subordinate to theology (Robins, 1951).

revival of interest in philosophical explanations for the nature and structure of language. Writers of this 'speculative grammar', commencing with Peter Helias, the French philosopher, and including later authors known as the Modistae, who also were associated with Paris University, agreed with traditional grammarians concerning the existence of one universal grammar. However, they argued that such a grammar was based on the natural order of things and the principles governing thought, a theme similar to that expounded by later generative grammarians.

But it was the literary approach of traditional grammarians that prevailed at the time. They argued that 'correct' usage of language meant strict adherence to grammatical rules derived from the classical languages. In so arguing, they believed that all languages could be locked into a timeless and universal set of rules that represented the best and purest forms of language. As Latin began to lose its status as the 'universal language of learning', with the emergence of the vernacular languages of Europe during the Renaissance, grammarians attempted to fit the grammatical realities of these languages into the pre-established structures of Latin. The publication by Robert Lowth, Bishop of London, of his Short Introduction to English Grammar in 1762, highlighted this trend among English grammarians.

The influence of traditional grammar on our understanding of the nature and structure of language lasted until the twentieth century, and is still influential among many teachers of English. Its overall impact has been summarised by Stork and Widdowson (1974, p.192): "It gave definitions, for the most part workable if not completely accurate, of parts of speech and of basic structures such as phrases,

clauses and sentences". In so doing, it touched on areas of linguistic inquiry that were to develop into the fields of phonology (speech sounds and their combination), morphology (the formation and function of units of meaning), syntax (the organisation of units of meaning into larger groupings), lexicography and semantics (the meaning of words and their combinations).

Throughout the nineteenth century, however, traditional grammar began to lose its influence as Europeans increased their contacts with, and interest in, other cultures, and as scientific methodology developed and began to have an impact. The work of ancient Indian grammarians, particularly that of Panini on Sanskrit, was discovered, providing an impetus to the development of comparative philology. As a consequence, Latin and Ancient Greek were reduced even further in linguistic status to that of equality with others of the Indo-European family of languages. Languages that bore no relationship to the classical languages, and with no written form, were subjected to analysis, necessitating the development of new techniques, which were then re-applied to the study of modern European languages. The development of phonetics provided a new means for studying and classifying the sounds of language.

Opposition to the approach of the traditional grammarians intensified with the increasing recognition and acceptance of the dynamic nature of language, and the consequent realisation that each language had its own specific grammatical structure. The work of a Swiss linguist, Ferdinand de Saussure, in particular, provided a major impetus for this view. By stressing the important distinction between studies of modern, as opposed to historic, forms of language (i.e. between synchronic and diachronic linguistics), he legitimised

the analysis of contemporary spoken forms. His lectures, published from the notes of his students in 1917, formed the first major treatise of a new approach that became known as structural linguistics (de Saussure, 1917).

3.4.2 Structural Linguistics:

Partly as a reaction against the prescriptive overtones of traditional grammar, and much influenced by Behaviourism, structuralists such as Bloomfield (1933), stressed the need for a scientific approach to the study of language. They challenged both the techniques and definitions of traditional grammar, claiming that many definitions were inconsistent and too dependent on subjective elements of language. They argued that linguistic analysis should be free from value judgements about preferred usage, and be limited to the description of language as it is actually used. Many structuralists concentrated on American Indian languages, and they rejected traditionalist notions of a universal or correct grammar. In developing their own concepts and techniques, they stressed the need to concentrate on the 'observables' of language in order to maintain 'scientific objectivity'. It was not until the 1950's, however, that the methodology of structural linguistics was formally applied to the description of English (Fries, 1952; Trager and Smith, 1956; Sledd, 1959).

Francis (1954) who refers to structuralists as "linguistic scientists", has summarised some of their methods. The structuralist, he writes:

... begins by breaking up the flow of speech into minimum sound units, or phones, which he then groups into families called phonemes, the minimum significant sound units ... These phonemes group themselves into minimum meaningful units, called morphemes. These fall into two groups; free morphemes, those that can enter freely into many combinations with other free morphemes to make phrases and sentences; and bound morphemes, which are always found tied in a close and often dissoluble relationship with other bound or free morphemes ... [He now] has some notion of the word stock (or lexicon) of his language. He must then go into the question of how morphemes are bound into meaningful utterances which is the field of grammar proper (pp.397-398).

Concepts and emphases that are fundamental to the structuralist's approach are evident in this quotation.

Phonology, for example, has attained virtual independence from formal grammar as a field of linguistic inquiry. It involves the application of phonetics, a comparatively recent science that concentrates on the study of the production, transmission and reception of speech sounds generally, to a particular language. The increased autonomy of phonology reflects, in part, the structuralist's concern for forms of language that are actually spoken, in contrast to the emphasis in traditional grammar on 'correct' literary forms of language.

This emphasis on spoken language led structuralists to the conclusion that 'letters', the symbols of written speech, were inadequate as a means of indicating and classifying speech sounds. They noted, for example, that the letters 'th' could be pronounced differently in words such as 'these' and 'things'. Consequently, they developed the concept of a phoneme to refer to the smallest unit of sound recognised by a native speaker as part of his language system. Subsequently, however, phonologists, such as Jakobson (1932), were to define it more in terms of a set of 'concurrent sound

properties'. Both phonemes and allophones (phonetic variations of phonemes, not given overt recognition by native speakers) were initially classified according to criteria based on their manner and place of articulation and whether they were actually voiced, as in 'd' or 'z', or not, as in 't' or 's'. Each was represented by a phonetic symbol as part of a phonetic alphabet. The 'th' in 'these' was thus described as a voiced dental fricative, represented by the symbol /ð/, while the 'th' in 'things' was categorised as a voiceless dental fricative, indicated by the symbol /θ/. Structuralists also extended the concept of a phoneme to include 'suprasegmental' features of speech, such as stress, intonation and juncture, that could not be separated into discrete units. Several studies have indicated that most languages have fewer than fifty phonemes, although the number may range from about eleven in Hawaiian to around seventy in some Caucasian languages (Elgin, 1973).

The next step in the structuralist's analysis of language is to investigate how sounds are combined to form units of meaning. For centuries it had been thought that words formed the basic meaningful units of language (cf. Aristotle). However, attempts to define satisfactorily the concept of a 'word' proved to be extremely difficult (Stork and Widdowson, 1974). Furthermore, it was realised that words themselves could be subdivided into smaller, meaningful units that were subsequently termed 'morphemes'. For example, the word 'quickly' could be divided into the free morpheme /quick/ and the bound morpheme /ly/. However, as Bolinger (1968) points out, the identification of morphemes can also prove quite difficult. For example, should the 'pre' in pregnant be classed as a morpheme as it is in 'predetermine'? Analyses such as these, that investigate the structure and function of morphemes

and the words they form, became the explicit task of the field of linguistic inquiry called morphology.

The third question of importance facing the 'linguistic scientist' in his inquiries, according to Francis, concerns the combination of morphemes into 'meaningful utterances'. He suggests that there are three bases of classification that can be used: form, function and meaning. In keeping with their emphasis on scientific objectivity, structuralists concentrated on form, while omitting completely, where possible, any reference to meaning when describing and classifying parts of language. Consequently, they were very critical of the emphasis, in traditional grammar, on definitions that incorporated the subjective element of meaning, as for example, in the definition of a noun, as 'the name of a person, place or thing'.

In English, 'meaningful utterances' may consist of single words or a series of words in combination. Structuralists differentiate, however, between the meaning of individual words considered separately (lexical meaning) and meaning that is conveyed by the form or arrangement of words (structural or grammatical meaning) (Francis, 1954). Lexical meanings include both the denotations and connotations of words. The word 'dog', for example, denotes a particular kind of four-legged animal that barks, but may connote ferocity or friendliness, depending on either the observer or the situation. Structuralists believe this area of linguistic inquiry is the domain of the lexicographer or the semanticist, and that grammatical analysis refers only to the structural meaning of words and combinations of words.

English has five devices for indicating structural meanings, several of which may operate concurrently in any utterance (Francis, 1954, p.401):

- (a) word order - the sequence in which words or combinations of words are arranged;
- (b) function words - words which have no lexical meaning of their own, but which indicate relationships between other words which do have lexical meanings (e.g. the article, conjunctions and prepositions);
- (c) inflections - alterations in the form of words themselves, to indicate changes in meaning, as for example, between 'love' and 'loved';
- (d) formal contrasts - an artificial extension of the previous classification based on the degree of difference in the meaning or function of words whose form has changed, as for example, between the words 'friend', 'friendliness' and 'befriend'.
- (e) rhythmical pattern - stress, intonation and juncture, indicated in written language by punctuation.

Structuralists split up sentences and words into their component parts in a process called Immediate Constituent Analysis. Words were analysed by dividing them into their constituent morphemes, while sentences were divided into words and groups of words. Labels were subsequently attached to these constituent parts in a process called Phrase Structure Grammar (PSG). For example, in the sentence 'the small boy threw a stone', 'the small boy' would be classed as a verb phrase (VP). Each could then be subdivided further into its component parts. Such divisions could be indicated by a tree diagram or a series of 'rewrite rules', such as $S \rightarrow NP + VP$, which translates

as 'a sentence can be rewritten as a noun phrase plus a verb phrase'.

Although several variations of PSG have been put forward (e.g. Halliday's (1956) Systemic Grammar; Pike's (1954) Tagmemics; Lamb's (1966) Stratificational Grammar), they are similar in that they are text-based, and thus attempt to describe and classify language that is actually used. In this respect they are consistent with the principles of Behaviourism, with its emphasis on the analysis of observables. By the middle of the twentieth century, however, these principles themselves were under attack. Critics argued that structuralists, in their reaction against the doctrines of traditional grammar, over-emphasised form and virtually ignored meaning - an intrinsic part of language. Even before the publication of Sledd's authoritative work on the application of structural linguistics to the analysis of English, A Short Introduction to English Grammar, in 1959, Chomsky had published his book, Syntactic Structures (1957), in which he attacked directly the approach of structuralism. In this and in later works (1965, 1967, 1968), he proposed a radically different approach to the study of language, known as Transformational Generative Linguistics, which is still being developed.

3.4.3 Transformational Generative Grammar:

Chomsky rejects the Behaviourist view of language as being the product of stimulus-response mechanisms, which give a person "a stock of utterances that he produces by "habit" on an appropriate occasion ... [or] a stock of "patterns" in which he inserts words or morphemes" (1967, p.111). Instead, he points to the creative character of language, the capacity for a man to understand and generate sentences that he has never before heard. Language, he argues,

consists of phonological and semantic associations that are organised into a system that is capable of producing an infinite number of sentences. The aim of linguistic theory therefore, he suggests, should not be directed towards the analysis and description of text, but towards the explanation of the underlying system that gives language this capacity.

In his analysis of language, Chomsky, as noted in Chapter 2, makes an important distinction between language competence and language performance. Language competence, he writes, refers to the mentally internalised "system of rules that determine both the phonetic shape of the sentence and its intrinsic semantic content" (1967, p.108). It represents an individual's capacity to produce and recognise grammatical sentences. Language performance, on the other hand, refers to "the actual observed use of language" (p.108). It makes use of much information beyond the sound-meaning association given by grammar, such as the status of the speaker or hearer, and operates under non-linguistic constraints such as memory or time. Competence, then, "is one of many factors that operate to determine performance" (p.110). Unlike the structuralists, Chomsky argues that it is the idealised model of competence, rather than performance, that is the true field of linguistic inquiry.

In his analysis of competence, Chomsky aims, not only to determine the rules governing the pairing of meaning and sound in particular languages, but also to discover what grammatical 'devices' underlie such pairings in all languages. By so doing, he hopes to establish a universal grammar that, ideally, comprises a finite set of all such 'devices', which, he suggests, may in themselves reflect the psychological realities of innate biological structures in human beings.

In discussing this approach, Chomsky acknowledges his debt to Wilhelm von Humboldt, the German ethnologist, who in the nineteenth century suggested that language "makes infinite use of finite means" (quoted in Chomsky, 1967, p.119). The task, as Chomsky sees it, is to determine the finite means, or limiting constraints, under which grammar operates.

He suggests that these constraints are of three kinds, that reflect what he claims are the three distinct, non-overlapping components of grammar: phonological, semantic and syntactic. The phonological component refers to the phonetic symbols and the laws that govern them, which operate to produce 'surface structure', the name given by Chomsky to the actual phonetic shape of utterances. The semantic component, on the other hand, is related to what Chomsky calls 'deep structure', the abstract plan of the sentence which "contains all information relevant to semantic interpretation" (p.118). The syntactic component comprises the rules that transform the semantic elements of deep structure into the phonetic forms of surface structure. A theory of linguistic structure or universal grammar, therefore, Chomsky argues, subsumes theories of universal phonology, universal semantics and universal syntax.

Chomsky asserts that "the theory of universal phonetics attempts to establish a universal phonetic alphabet and a system of laws" (p.114). In defining the elements of such an alphabet, however, generative grammarians reject the concept of a phoneme, which they claim is superfluous. They concentrate, instead, on the distinctive features of particular sounds. They argue that the phonetic elements of all languages are categorised more efficiently in terms of the presence or absence of particular sounds properties, rather than in terms of a

series of phonemic alphabets. The number of elements in such a classificatory system would be less, and it would include reference to similarities, as well as to differences, between the various sounds. Although some recent attempts to introduce an acoustic-based system have been made, generative grammarians, like structuralists, usually define phonological features in terms of their articulatory characteristics.

Regularities underlying the sequence and combinations of phonetic elements in a particular language also have been investigated by generative grammarians. They seek to explain why combinations such as 'wsno' cannot occur in English, while others such as 'snow' can, and to discover rules, such as those governing the different pronunciation of the plural elements of such words as 'logs', 'hats' and 'glasses'. Jakobson's (1941) work, which will be discussed more fully later, suggests that such 'morphophonological rules' may have a biological basis.

Regularities underlying the morphemic organisation of sentences similarly constitute a major province of inquiry for generative grammarians. Chomsky argues that examination of the outward form only of utterances, as occurs with phrase-structure grammars, is insufficient. Phrases with similar structures, he points out, may convey fundamentally different meanings or contain inherent ambiguities. Conversely, very different sentences may convey virtually identical meanings as occurs, for example, when an idea is expressed in passive voice and in active voice.

Consequently, he postulates a two-tier model of language in which a lower level or deep structure embodying the semantic content of

a sentence undergoes a transformation to produce the surface structure that is actually spoken or written. The mechanism he posits as controlling this transformation is a set of syntactic regularities or rules, knowledge of which is essential for native speakers of a given language. As with the phonological component, the syntactic component of a particular language is thought to comprise a subset of a finite set of rules governing all languages (i.e. part of a universal syntax).

In keeping with his view that syntax and semantics are separate components of grammar, Chomsky also argues for the development of a universal semantics. He notes, for example, that sentences in English such as 'colourless green ideas sleep furiously' or 'the circle is square' are unacceptable, even though they conform to established syntactic and phonological rules. They are rendered meaningless, he suggests, because they fail to satisfy semantic criteria. No account has been taken of the nature of the concepts contained in the sentences, nor of their possible combinations. Consequently, according to Chomsky (1968), along with the need for a universal phonology and a universal syntax, there is a need "to establish a universal system of semantic features and laws regarding their interrelations and permitted variety" (p.115). With such a system, individual concepts, referred to by Chomsky as "units of semantic interpretation" (p.113), could be categorised according to such properties as animate-inanimate, agent-object or relational-absolute. Elaborating, he suggests that the 'laws' governing their possible combinations reflect both the nature of the concepts and biologically-based, cognitive constraints on how they can be related, as, for example, in the realisation that an agent acts, while an object is acted upon.

The development of a system of universal semantics is still in its infancy, however, and subject to much controversy. Clark (1973), for example, has proposed a 'semantic feature hypothesis' which proposes that children acquire the meaning of words by gradually adding various semantic features. Katz and Fodor (1963) also have developed a theory of meaning that incorporates the idea of semantic features. In their view, words are subject to 'selection restrictions', which limit their possible combinations. Both proposals have been criticised, however, for not catering for all the dimensions of meaning (Dale, 1976). The development of such a system is made difficult by the need to encompass all forms of language, including idiomatic usage, as in the sentence, 'he kicked the bucket', which may have more than one semantic interpretation. Such difficulties have led some theorists, such as Fillimore (1968) and McCawley (1968) to challenge Chomsky's claim that the syntactic and semantic components of grammar are independent. They extend his division of grammar into deep and surface structure to include additional lower-level structures in which the semantic and syntactic elements are interwoven.

The full impact of Chomsky's conceptual breakthroughs has yet to be assessed; but his re-introduction of meaning as an important and legitimate component of language requiring analysis, by linking it with his conceptual device of deep structure, represents a significant advance over structuralism. Along with his renewed emphasis on linguistic universals, his stress on the importance of meaning brought linguistics once more within the reach of other disciplines and offers fresh perspectives to controversies concerning the relationship between language and thought. What, for example, is the relationship between his idealised model of language and the actual psychological structures

underlying the use of language? Is thought moulded by the structure of language, or vice versa? How are language and thought related?

3.5 LANGUAGE AND THOUGHT

The exact nature of the relationship between language and thought has yet to be determined, but competing theories that have been proposed offer important insights. A basic issue is whether or not language and thought have the same origins, and, if so, whether language develops from thought, or thought from language. Associated issues concern the power of language to act as either a limiting or a liberating agent. To what extent, for example, does it channel thought by forcing it to conform to pre-established patterns that characterise a particular language community? Or, from a different viewpoint, how much does it liberate thought by freeing it from the constraints of a sensorimotor dependence on immediate context, thereby enabling it to advance to the more flexible realms of abstraction?

According to Sapir (1921), "language, as a structure, is on its inner face the mold of thought" (p.22). He claims that "auditory imagery and the correlated motor imagery leading to articulation are ... the historic fountainhead of all speech and of all thinking" (p.21). He argues, further, that with the aid of language man is able to reduce the myriad of different objects, events and relations he experiences into manageable proportions by grouping them into classes or concepts. These concepts are represented in symbolic form by the 'significant elements' of speech, such as morphemes, which, when organised into grammatical utterances, enable a representation of the way in which different concepts are related. Consequently, according to Sapir, the shape of thought is dependent on language.

3.5.1 The Whorfian Hypothesis:

A student of Sapir, Benjamin Whorf (1956), extended this viewpoint even further. Whorf reasoned that, since language determines thought, then the native speakers of languages that differed greatly would conceive the world differently. In a sense, his hypothesis foreshadowed the position of language deficit theories noted previously. In support of his view, he noted that a direct translation of an idea from one language to another was not always possible, as languages varied in both syntactic and lexical categories. Some American Indian languages he studied, for example, do not distinguish clearly between past, present and future. Others blur the distinction made in English between nouns and verbs. The Nootka Indians of Vancouver, for example, would say the equivalent of 'it stones down' to describe an event which in English would be expressed as 'the stone falls'.

Lexical categories differed in several ways. Words such as 'détente', that express adequately a concept in one language, may be absent in another. Finer or broader distinctions between sets or subsets of objects made by various groups also may reflect available lexical categories. Eskimos, for example, have many words to indicate different kinds of snow. Similarly, the Hunanoo of The Philippines have names for ninety-two different kinds of rice (Hilgard and Atkinson, 1967), and some South American Indian languages have words for certain kinds of bird, but have no equivalent term for the more general concept, expressed in English by the word 'bird' (Dale, 1976).

Whorf's hypothesis has led some researchers to investigate the role of language in perception. Brown and Lennenberg (1954), for example, found that the most commonly named colours in English (red,

orange, yellow, green, blue, purple, brown and pink) are also the ones that are most easily identified by native speakers of English. Such easily 'coded' colours also were remembered and recognised more readily when reproduced with an array of other colours after a longer (three minutes), rather than a shorter (seven seconds) time lapse.

Lennenberg and Roberts (1956) repeated the experiment using Zuni Indians as subjects, with similar results except that colours common to their language and not English were the ones most easily coded. Lantz and Steffire (1964), however, suggest that too much importance may have been placed on the role of lexical categories in shaping the perception of colour. Their research indicates the contrary - that the accuracy with which a colour can be described and communicated to others may play a major role in its retention and subsequent recognition.

More recent research, however, tends to weigh against Whorf's position, and with increasing emphasis being placed on discovering, and exploring the nature of language universals, interest in his hypothesis has declined. Berlin and Kay (1969), and later Heider (1971), for example, have cast doubts on the idea that language directs the way in which we perceive colour. They argue that certain focal areas of colour are universally attended to by human beings, and that colour naming simply expands on these focal colours. The existence of such universal perceptual tendencies in human beings, if substantiated, would indicate that biological mechanisms may underlie the categorisations of perceptual continua, and that language simply builds on this biological basis.

Critics of the Whorfian hypothesis also argue that concepts expressed in one language can usually be expressed in another, although perhaps less neatly. The various kinds of snow named by Eskimos, for example, can still be described accurately in English. Hence, it is argued, language reflects cultural emphases, and the importance of various elements in a group's environment. It does not cause these elements to be perceived in a particular way. As a result of such arguments, a more moderate version of Whorf's hypothesis has been proposed, which suggests that, rather than differing in what can be said, languages vary only in their emphases and the ease with which some concepts can be expressed (Carroll, 1963).

3.5.2 Bruner Versus Piaget:

Although support for Whorf's hypothesis has generally declined, the fundamental issue of whether language derives from thought, or thought from language, remains. Perhaps the most influential contemporary psychologist to share Sapir's view, that language is crucial to thought, is Jerome Bruner (1964; Bruner et al., 1966). He contends that a child's progress, beyond what he calls the enactive and iconic modes of thinking to the more advanced symbolic level, occurs because of the acquisition of language. In freeing thought from the realms of motor activity and concrete operations, language enables it to become more subtle, flexible and abstract. Hence, he argues, the symbolic nature of language enhances man's power to manipulate the elements of a problem and to consider various alternatives, thereby providing a means for making logical judgements.

In support of his view, Bruner (1964) quotes a study by Frank, who found that language may play a role in the development of

conservation. She demonstrated that children in the transitional stage, between iconic and symbolic thinking, who were shielded from the distraction of perceptual cues, could use language as a basis for their acquisition of the concept of conservation. Bruner argues that, in the real-life situation, the development of conservation depends on the resolution of a conflict between perceptual and symbolic information. It is acquired, he suggests, when the child resolves the conflict by learning to rely on the symbolic information available to him through language.

Bruner expands his argument by claiming that language enables man to categorise regularities in his experience. In so doing, it provides a systematic means for relating and interpreting them. He draws parallels between the hierarchical nature of syntax and of symbolic thought and, like Chomsky (1968), considers that elements of deep structure may reflect basic logical relations. Verb-object constructions, for example, may reflect the relation between cause and effect. Similarly, modifier-head constructions may represent the intersection of two classes. Such concepts can be organised into a logical and interrelated sequence, he suggests, because of the transformational capacity of language to change deep structure into a coherent communicable form.

In contrast to Bruner, Piaget (1959) argues that while language may be a product of, and even assist, the evolution of logical abstract thought, it is not essential for its development. Both have their roots in the structures formed from the child's sensorimotor experiences, with language coinciding with, but not causing, the emergence of thought proper. Language acts, he suggests, as a kind of 'cognitive tool' that assists in increasing both the speed and range of thought by facilitating the manipulation of internal representations in

the formation of new schema. It also may support representational thought by aiding, but not prescribing, man's systematisation and socialisation of his experiences by encouraging him to focus on regularities that are necessary for communication and the exchange of ideas with others of his language group.

Piaget and Inhelder (1969) cite experiments with deaf and blind children as support for their stance. In one such study, Furth (1966) found that deaf children developed logical thought in much the same sequence as normal children, although many abilities appeared from one to two years late, suggesting that language is not necessary for the development of logical thought, but that it may facilitate it. Blind children with normal verbal development showed delays in the development of particular concepts of up to four years. Piaget and Inhelder claim that these findings suggest that normal verbal performance does not make up for the hindrance to the development of sensorimotor schemata, caused by blindness.

Sinclair de Zwart (1969) provides further support for Piaget's view. Her research suggests that, although language may assist in pinpointing, storing and retrieving relevant data, such as dimensions and relations in conservation problems, language training alone cannot lead directly to the acquisition of conservation. She concludes that cognitive structures that are independent of language require co-ordination and integration before concepts such as conservation are developed.

3.5.3 Egocentric Speech:

Piaget classifies the preoperational child's speech into two categories: egocentric and socialised. Egocentric speech is more prevalent throughout the earlier years, from approximately two to five years of age, but gradually loses ground to socialised speech, and virtually disappears by the age of about six or seven years. Its main characteristic is that it is effectively uncommunicative, although Piaget's contention, that the child has no intention of communicating when using it, is controversial (Vygotsky, 1941). Piaget (1959) distinguishes three manifestations of egocentric speech: (a) repetition, in which the child repeats the utterances of someone else; (b) monologue, in which he talks about what he is doing, even though no-one else may be present; and (c) collective monologue, in which he talks aloud in the presence of others, but where no obvious communication takes place. It functions, Piaget claims, as a form of play, which provides the child with language practice.

Piaget argues that this speech reflects the child's overall egocentrism, and his consequent inability to distinguish between his own perspectives and those of others. Even the child's socialised speech, according to Piaget, reflects this egocentrism, as the child appears not to be trying hard to make his speech understood by others; often, it seems, because of the mistaken belief that he has been understood. He notes, for example, that children will use gestures to indicate to a blindfolded experimenter where an object is, with an accompanying utterance such as, 'It's over there'. Gradually, however, social pressure forces the child to abandon his egocentric speech and to use only socialised speech. This is especially true when he attempts to communicate effectively with his peers, who are less likely than are

adults to determine his meaning from contextual clues. Piaget notes, for example, that egocentric speech occurs more often when the child is conversing with adults than with peers.

Many Russian psychologists have a different view of the relationship between language and thought. Vygotsky (1941), for example, argues that language and thought have different origins. After a period of time, however, their separate lines of development intersect, with thought becoming verbal and speech rational. The process of thinking, according to Vygotsky, takes the form of inner speech, a highly-abbreviated, internalised form of language, in which predicates predominate. In this respect he agrees with Bruner.

Vygotsky also takes issue with Piaget over the function of egocentric speech. He claims that, although initially unable to distinguish between communication with himself and with others, the child, from the start, uses all language with the *intention* of communicating. Egocentric and socialised speech, therefore, he argues, are not fundamentally different types of speech, but variations of the same thing. Hence, rather than withering away, as Piaget has suggested, egocentric speech, according to Vygotsky, becomes internalised to form inner speech. Noting that, in young children, it occurs at the beginning of some activity, then, as the children grow older, in the middle, and finally, at the end, he suggests that it has the function of self-guidance; the same function that inner speech has for adults. Progressively, the children learn to differentiate it from socialised speech.

In support of his view, Vygotsky notes that such speech becomes more abbreviated and egocentric as the child grows older, rather than becoming less so, as Piaget's early interpretation would suggest.

He also cites experiments which demonstrate that the frequency with which a child uses speech will decrease if he receives no reinforcement from others, indicating that its production is not independent of communication, as Piaget initially suggested. In his later work, Piaget (1962) modifies his views somewhat, in line with Vygotsky's criticism.

It is clear, then, from the above discussion, that contemporary knowledge of the exact nature of the relationship between language and thought is still insufficient. Nevertheless, virtually all theorists agree that language facilitates the development of logical, abstract thought. It is the nature and importance of its influence that is in dispute. Some deeper insights into the nature of this influence, and of cognitive development generally, may be gained by examining more closely the acquisition of language and its underlying structures.

3.6 THE ACQUISITION OF LANGUAGE

By the age of about six years, a child has acquired most of the linguistic code of his community, and thus has the potential to generate an unlimited number of sentences. In addition to learning the relevant phonetic symbols of his native tongue, he has learnt how they can be combined to indicate meaning. Hence, he is able to associate meaning, both with individual morphemes, and with a wide variety of sequences of morphemes. He has this capacity because he has somehow acquired an implicit knowledge of the complex rules, both of phonology and of syntax, which regulate the way in which sound symbols can be combined and used to represent meaning.

How does this come about? How is it that an infant, born into a myriad of different sounds, gradually develops the capacity to make sense of, and use, the verbal symbols of his community, particularly as the linguistic data he is exposed to - actual performance - does not itself always conform strictly to underlying grammatical rules? Put more simply, how does a child acquire the structures of language in developing linguistic competence?

Although the 'how' of language acquisition is still primarily conjectural, some insights can be gained by looking at two main theoretical positions. On the one hand, Behaviourists, in line with the Empiricist position, emphasise environmental influences, which they see as shaping language, in accordance with general learning principles associated with conditioning. Their opponents, such as generative grammarians, on the other hand, adopt the viewpoint of the Rationalist philosophers. They argue that language development is primarily directed by specific, innate, maturational processes that are unique to human beings. Both camps disagree, therefore, both quantitatively about the relative importance of environmental or genetic factors, and qualitatively with regard to the presence or absence of a specific linguistic mechanism, as part of man's genetic endowment.

Before examining these opposing viewpoints in greater detail, however, it is important to review the course of language development and some attempts to describe it. In addition to shedding light on the strengths and weaknesses of these two major theoretical camps, such a review can also enhance our understanding of some of the issues involved in current controversies concerning the relationship between cognitive development and the acquisition of language.

A child appears to progress through a series of identifiable stages in his language development. Initially, his 'pre-language' capacity to distinguish and produce sounds is tied to his neuromuscular development. With increasing muscle control, he is able to produce sounds that become progressively more speech-like. He then learns how such sounds can operate as symbols. Meaning becomes attached to the combinations of these symbols that he hears, and, gradually, through conscious effort, he learns to produce appropriate sound combinations to convey his own meaning. Progressively thereafter, he develops the capacity both to comprehend and to produce increasingly more complex utterances.

When describing language development, many linguists have found it useful to distinguish between receptive and expressive (or productive) language skills (Stork and Widdowson, 1974). Receptive skills refer both to the infant's initial ability to distinguish between sounds, and to his later abilities to recognise and comprehend them as part of a symbolic system. Expressive skills refer to his ability to produce sounds that become progressively more speech-like, and also to his later ability to produce language that is 'grammatical'. Usually, the development of receptive skills precedes the development of expressive skills. However, examples where the reverse occurs are not uncommon, a point that will be returned to later.

3.6.1 Receptive Skills:

The origins of receptive skills lie in the emergence of perceptual capabilities. Bombarded from birth with sensorial stimulation, the infant begins to link sounds with other percepts. A child as young as three weeks, for example, will respond to the location of a

sound. He will turn towards the direction of his mother's voice, and will become disturbed when audio-speakers are used to displace her voice, when she is visible through a glass screen. Gradually, as his ability to distinguish between perceptions develops, he is able to make increasingly finer distinctions between various sound properties (Dale, 1976).

A child's auditory system appears to be especially attuned to the human voice. From about six weeks of age, he is able not only to distinguish it from other sounds, but also to discriminate better between speech sounds than between non-speech sounds of similar acoustic magnitude. Initial distinctions are between syllables in which the consonant is present, and those in which it is absent. Other distinctions are made between syllables in which the consonants vary by voicing, as in 'pa' and 'ba' or by place of articulation, as in 'ga' and 'ba', and between vowel contrasts such as 'a' and 'i', which vary in tongue height and placement. Some intonation patterns also can be distinguished (Dale, 1976). By about three months, an infant is able to distinguish between his mother's voice and that of another adult female.

Although forming a prerequisite for its development, the capacity to make perceptual discriminations between sounds does not imply recognition or comprehension. Dale (1976) notes that little is known about the infant's ability to attribute meaning to utterances, as controlled experimentation is difficult between the ages of about four to twelve months. Anecdotal evidence, however, suggests that intonation patterns are important. Infants aged approximately six months, for example, appear able to distinguish between 'tones of voice' as in expressions of affection or scolding. Progressively, the

ability to associate meaning with segmented phonemes also develops. Simple words, such as 'Teddy', begin to be understood at about nine months, as are simple commands (using more than one word) at about twelve months (Stork and Widdowson, 1974). Gradually, as the child reaches eighteen to twenty-four months, he develops the capacity to comprehend increasingly more complex constructions. By the age of five or six years, he is able to understand most of the grammatical structures of his native language.

Although most linguists agree that comprehension usually precedes production, verification of this viewpoint has proved difficult, and, as indicated earlier, some counter-examples consistently show up. Fernald (1972), for example, failed to confirm the finding by Fraser, Bellugi and Brown (1963) that young children exhibited the ability to imitate speech first, followed by comprehension, and finally by production. When he employed scoring modifications based on his criticisms of the earlier study, he found no difference in performance between comprehension and production.

Examination of instances in which production actually precedes comprehension, such as with word order, or subject-verb agreement in number, has led to the suggestion that the competence underlying comprehension may be different from the competence underlying production in early language. In studying word order in the language of young children, for example, de Villiers and de Villiers (1973) found that, while the correct production of both passive-voice and active-voice expressions was high (about 95%), comprehension of both was less accurate, and correct comprehension of passives actually declined sharply from about 42% between MLU⁽¹⁾ 1.5 and 3.0, to about 13% between MLU 3.0 and 3.5.

(1) Mean Length of Utterance, a linguistic concept that will be explained more fully later in the text (p.144).

Investigating the phenomenon further, Chapman and Miller (1975) found that 96% of utterances in which the subject was animate and the object inanimate were successfully understood by the children they studied, while only 37% of utterances with an inanimate subject and an animate object were interpreted correctly. In contrast, production of both types was consistently high (80-90%). They concluded that the semantic component of language may play a greater role in comprehension than in production and that, consequently, syntactic elements such as word order may play only a secondary role in comprehension. This may explain why non-Standard English speakers, studied by Labov (1970), have difficulty in reproducing, but not in understanding, Standard English construction.

3.6.2 Expressive Skills:

Expressive skills involve the active production of language. Although not considered part of language development, the birth cry initiates neuromuscular activity that will later be refined and developed to produce the sounds of language. Gradually, as greater control is exercised over articulatory organs such as the tongue and lips, early vocalisations become more speech-like. Finally, individual speech sounds and their combinations are used to convey meaning and, as the regularities underlying speech production are acquired, complex language structures emerge. Three phases in this development can be identified: early vocalisations; the first words; and syntactic development.

3.6.3 Early Vocalisations:

Early vocalisations are thought to pass through a series of four sequential stages: crying, cooing, babbling and patterned speech, but the age at which each is reached and the smoothness of transition from one to the next may vary from child to child. The first two stages occur during the first two to three months of life, and are thought to be essentially involuntary reflexes. Crying dominates the early period and is generally used to signal discomfort. Progressively, after the first month a greater range and variety of vocalisations that make more use of the articulatory organs occur, to signal pleasure as well as displeasure. At about two months, a class of sounds similar to back vowels such as 'oo' typify the 'cooing stage'.

The final two stages primarily represent a progression from a period of phonetic development and experimentation to a period of phonemic development. Covering the period from about three to nine months, the babbling period involves the conscious production of sounds that approximate increasingly the syllables and intonation patterns of adult speech. Towards the end of this period, the child attempts to echo adult speech, and re-duplication occurs, in which syllables are repeated, as in 'dididi...'. Herriot (1970) suggests that the babbling period is the stage when certain general skills required for articulation are acquired, such as co-ordination of the movements of the larynx and other organs such as the tongue. He also suggests that the child develops a 'feedback loop', which enables him to modify the sounds he makes after hearing them.

Stage 4 marks the emergence of phonemic as opposed to phonetic development. Sounds begin to be used consistently in a

controlled fashion to convey meaning. Initially these sounds may be combined to produce the child's own jargon, but progressively they correspond to the patterns of adult speech. A notable feature of this period is the sharply reduced range of phonetic syllables used by the child in his attempts to make his utterances understood, for the most part deleting those not present in the language of those about him.

Jakobson (1941) and Jakobson and Halle (1956) maintain that the distinctive features identifying various phonemes are acquired universally in an ordered sequence. As evidence they cite: (a) the apparently universal early appearance in different languages of the three phonemic contrasts, oral-nasal, labial-dental and stop-fricative; (b) the principle that the acquisition of one phonemic feature is a precondition for the emergence of another (irreversible solidarity); and (c) the late and infrequent occurrence of difficult phonemes in various languages. They also note that the sequence is reversed with the onset of aphasia.

3.6.4 The First Words:

Depending on the criteria used to define them, the first words are produced by most children between the ages of ten and thirteen months (McCarthy, 1954). In subsequent months, other words are acquired one at a time, in a rapid fashion (Bloom, 1973). In an intensive study of the vocabulary growth of young children, Smith (1926) found that the number of words acquired grew from about three at twelve months and twenty-two at eighteen months, to about 270 at twenty-four months, 890 at three years and 2,500 at six years. Approximately fifty have been acquired before two or more are put together at about twenty months (Nelson, 1973).

Phonetic, semantic and functional similarities typify these early words. In support of Jakobson's stated viewpoint, they share phonetic regularities, such as comprising one or two syllables, in which vowels are often combined with front consonants. Diphthongs and consonantal clusters are usually absent, and mistakes such as the substitution of 'w' for 'r' in words such as 'right', to produce utterances such as 'wight', tend to be regular, indicating the existence of underlying rules.

Word meaning provides a key for understanding early cognitive processes in conceptual, as well as linguistic, domains. Perceptual changes, such as the appearance or disappearance of an object, often appear to precipitate the use of a word. They are rarely used simply as labels for objects or events, however, for, depending on the context, children will often use single words as requests, negations, descriptive statements or imperatives. Termed 'holophrastic speech', words used in such a way appear to represent an attempt by the child to express complex ideas that are expressed in sentence form by adults. Linguists are generally unclear as to whether holophrastic speech reflects limitations that are essentially linguistic, maturational (as in attention or memory), or egocentric, in that the child fails to recognise that a single word may not convey accurately his meaning (Dale, 1976).

Several attempts have been made to categorise the first words produced by children. Clark (1973) reviewed anecdotal evidence, in the form of diaries, and found that over-extensions were a common phenomenon. Children often use words to cover wider categories than adults who use the same word. 'Dada' for example, may be used by a child to refer to any male, rather than simply his father. Clark found

that a high proportion of these over-extensions were either perceptually or activity based. Most common were perceptions based on shape, sound, size, taste, texture and movement. Notable exceptions to this trend were references to colours and proper names. Bloom (unpublished, cited in Dale, 1976) suggests that a third broad 'relational' category is necessary to account for words such as 'more' which, she claims, are based neither on actions nor on perceptions. Dale (1976) notes that over-restrictions, words used by children that cover a narrower category than when used by adults, also may occur. They are usually less noticeable than over-extensions, however, since the absence of words on appropriate occasions is more difficult to detect than their misapplication on inappropriate occasions. He also notes that the meaning of words gradually may be refined as new words are acquired that take over part of the meaning of the original word.

Nelson (1973) studied the first fifty words of a group of children and classified them by function. Using six categories, she found that the children's vocabularies consisted of a high proportion of general nominals (e.g. 'ball'), followed by specific nominals (e.g. 'Teddy'), action words (words that demand or describe action), modifiers, personal-social words (e.g. 'please', 'no') and function words, in generally decreasing proportions. Children who were the first-born of more-highly-educated parents used a higher proportion of general nominals, and a lower proportion of personal-social words, than did children who were later in the birth order, and who had less-well-educated parents. Nelson notes that more-educated mothers spoke more about objects to their children, and less about the children themselves, than did the less-well-educated mothers. A further point she noted was that the general nominals referred to by the children tended to be

entities that the child could act on (ball), or which could act by themselves. Large, comparatively immovable, features of their environment, such as trees or lounge chairs, rarely were mentioned.

At about eighteen to twenty months of age, the appearance of two or more words strung together in the speech of children indicates the emergence of syntactic development. Brown (1973) has proposed that this development proceeds through a series of stages, which he defines by using the linguistic concept known as Mean Length of Utterance (MLU). It is used generally to refer to the average number of morphemes (as opposed to words) used by an individual in his utterances. Brown proposed that the period between the initial word of multi-word utterances and MLU 2.0, be termed 'Stage 1 speech', and that Stages 2 to 5 follow with each 0.5 increment in MLU. The length of individual utterances may vary considerably from about MLU 1.5, when one- and two-word utterances occur with about equal frequency, and three-word utterances begin to appear.

3.6.5 Stage 1 Speech:

In the sense that language, as Sapir (1921), noted previously, described it, is a regulated system of sounds used in the comprehension and expression of "ideas, emotions and desires", Stage 1 speech represents its true beginning. It has its own structure, and therefore operates according to its own underlying regularities or rules. Consequently, although having a more limited form than adult speech, it should not be thought of as a poor imitation of it. Its surface structure resembles the language used by adults in telegrams (telegraphic speech), as both function words (such as prepositions, auxiliaries, conjunctions and articles), and inflections (such as are

used to indicate past tense or plural number) are usually absent, while verbs, nouns and modifiers predominate (Dale, 1976). Since it operates according to its own structure, however, infant speech can be used creatively, to produce phrases such as 'barefoot all over' which are unlikely to be imitations of adult speech.

Perhaps the most influential grammar developed to describe utterances of up to two words, that are characteristic of children at the beginning of Stage 1 (MLU 1.0-1.5), was formulated by Braine (1963), and later, using different terminology, by Slobin (1968) and McNeill (1970). Called pivot-open grammar, it divides words into two classes: pivot and open. Pivot words are primarily function words and have a fixed position in all two-word utterances of a particular child. Open words comprise the bulk of a child's vocabulary, and operate as full semantic words. Although less numerous than open words, pivot words are used more frequently, and, unlike open words, are added to only slowly and cannot occur alone, or with other pivot words. In an example used by Braine, the word 'see' is a pivot word in the constructions 'see baby' and 'see pretty'. Using this grammar, all of a child's utterances at this stage of language development can be grouped into four categories: open, open+open, open+pivot and pivot+open.

Some critics claim, however, that pivot grammar is too restrictive and, in some cases, inadequate. It cannot, for example, be extended to include three-word utterances (Stork and Widdowson, 1974). Bowerman (1973) also notes that few words fit completely the criteria used to define pivot words. She notes that the word 'byebye', for example, although operating as a pivot word, may occur at both the beginning and end of two-word utterances. Bloom (1970) argues that, by focusing only on words and their sequence, linguists cannot obtain

precise information about the intended meaning of a child's utterances. She suggests that the context in which utterances are made is important. In support of her view, she notes that the sentence 'mommy sock' could refer either to a mother's sock, or the fact that a child wants his mother to help him put on his own sock.

Detailed examination of the semantic content of utterances occurring throughout Stage 1 have been carried out by Brown (1970) and Slobin (1970). They found that, if word order was ignored, the early speech of young children from different language communities would read like direct translations. A set of about eighteen 'semantic relations' appear to reflect a universal set of constraints that limit the ideas a child can express at this level of language development. These relations primarily reflect a more advanced ordering of the sensorimotor experiences of the child than do the first words. All utterances throughout this period, although varying in the number of their constituents, include only relations that are taken from the basic form, agent-action-modifier-object-locative (Dale, 1976). Agents tend to be animate, and objects inanimate, while modifiers refer to relations, such as recurrence, attribution or possession.

Although, in English, word order generally is a good indicator of the semantic content of utterances in the early speech of young children, this is not the case for children who belong to inflectional-language communities which do not emphasise word order to convey meaning. Wieman (quoted in Dale, 1976) has suggested, however, that stress may provide a universal linguistic means for children to express such meanings, and has devised a hierarchy in which increasing stress follows a distinct pattern, with agent at the bottom, action and possessive further up, and new or contrasting information at the top.

While it cannot be assumed that all concepts immediately find linguistic expression, nor that, if not expressed, they are absent, the analysis of semantic relations does provide valuable insights into conceptual, as well as linguistic, development. Throughout the progression from two-word to four-word utterances during Stage 1, for example, meaning is limited to the same set of relational concepts, noted previously. The order in which they are expressed in English is also consistent. The difference between two- and four-word utterances is not one of semantic content so much as of the number of ideas that can be linked together at the same time. Development of both capacities appears to involve a progression from an initial inability to attend to more than one conceptual relationship at a time, to an ability to consider two or more together. This suggests a consistent, biologically based, pattern underlying the development of both capacities, and echoes Piaget's description of the development of cognitive processes such as classification.

3.6.6 Stage 2 Speech:

The essential difference between Stages 1 and 2 is the emergence of inflections in the latter. It is a slow process, that continues beyond Stage 4. Although research findings with other languages are unclear, the order of inflectional acquisition in English is highly regular. Using a criterion of 90% usage in 'obligatory contexts', Brown (1973) found that the sequence in which fourteen inflections or 'grammatical morphemes' were acquired was very similar for the children he studied. He also found a correlation of 0.92 between their order of acquisition and MLU. Overall there appears to be a trend from concrete to more abstract inflections, with present

tense (-ing) and plural (-s) forms being learnt early, while inflections indicating past tense (-ed), case, and subject-verb agreement on number, are learnt somewhat later. In languages such as Russian, inflections indicating gender, which is unrelated to the lexical meaning of words, will be among the last learnt.

The principles governing the order in which inflections are acquired also have been investigated, and both syntactic and semantic complexity have been implicated. The level of complexity of each is difficult to define, however, and their relative contributions to the acquisition of inflections are hard to disentangle. Nevertheless, studies by Slobin and Bowerman do provide some insights. Slobin (1973) notes that children who are bilingual in Serbo-Croat and Hungarian are able to express directional location (for example, into) in Hungarian, which requires only a noun suffix, but not in Serbo-Croat, which requires both a preposition and a suffix. Similarly, Bowerman (1973) found that Finnish children did not produce yes/no questions, which in Finnish require a specific inflection, until Stage 2, whereas children from other language groups, in which these questions require only a rising intonation at the end of a statement form, could produce them during Stage 1. Both studies indicate, therefore, that although the semantic component may be important in the development of new linguistic forms, syntactic complexity is an additional and independent variable. Concepts that already exist, therefore, must await the emergence of appropriate syntactic mechanisms before they can be expressed.

Other characteristics that may influence the order in which inflections are acquired, according to Dale (1976), include their 'perceptual salience' and the degree of redundancy associated with

individual inflections, such as those in English indicating number on both nouns and verbs. He discounts the frequency of their occurrence in adult language as being a factor, as it shows virtually no correlation with their order of acquisition. In an attempt to discover more precisely the conditions which influence the development of inflections, Popova (1973) found that children were more likely to learn new inflections if their use was accompanied by perceptual indications of their meaning, rather than if the children were exposed to verbal corrections only.

Like the findings of Slobin and Bowerman, noted above, this finding supports Piaget's (rather than Bruner's) viewpoint, as it indicates that conceptual development is largely independent of language, which acts, rather, as a medium for the expression of already-existing concepts. The inferior communicative performance of non-Standard English speakers found by Kirk and Hunt (1975) and their colleagues, referred to previously (Section 3.3), therefore, does not mean necessarily that the language system of these children impedes conceptual development. Rather, the findings indicate only that it may hinder the expression of conceptual distinctions that are communicated more easily in Standard English, and, as we shall see (Section 3.8), even this 'deficiency' may reflect non-linguistic contextual influences.

As with earlier acquisitions, a typical occurrence associated with the development of inflections is the systematic nature of mistakes that occur consistently in the speech of young children. Over-regularisation is perhaps the most common phenomenon. It refers to the misapplication of 'inflectional morphemes' in irregular cases. Misapplication of the inflection indicating the plural form of count nouns, such as 'dog', to mass nouns, for example, leads to expressions

like 'sands', when referring to a bucketful of sand. Similarly, the inflection indicating the past tense of regular verbs (-ed) will often accompany irregular verbs to produce words such as 'goed' or 'sitted.

Usually a new inflection will occur in about 10% of a child's utterances at first, and then will increase rapidly in frequency of usage to about 90% (Cazden, 1968; Brown, 1973). Over-regularisations usually accompany this rapid increase, indicating that the child learns patterns which supersede previous learning that occurred by rote or by imitation. The strength of this pattern has been demonstrated by Berko (1958). She introduced a picture to a child using constructions that contained nonsense syllables, such as 'here is a wug', then, when introducing another picture, she would say 'here are two ...' with a rising intonation. Children generally were able to provide the correct inflection, although she noted that plural forms ending in 'es (gutches) were more difficult, thus indicating that phonological complexity plays a role in determining which inflections are more likely to be over-generalised.

3.6.7 Later Syntactic Development:

From about MLU 2.5, the beginning of Stage 3 speech, syntactic development primarily involves the acquisition of new transformational rules, in a step-by-step fashion (Dale, 1976). The full range of sentence types exists - imperatives, negatives, declaratives, and interrogatives - but their forms are different from adult speech in a regularised way. Even attempted imitations of adult speech are imperfect reproductions, governed by these different but distinct grammatical rules. As with earlier language development, comprehension usually (although, as noted previously, not always) precedes production, and mistakes tend to reflect the misapplication of regularised patterns.

The acquisition of syntax also follows a regular pattern. In English, for example, questions of the type 'Who...?', 'What...?', 'Why...?' are indicated initially by the addition of a 'wh' word to the beginning of a statement form ('Where mommy go?'). Later, after the child acquires the capacity to use auxiliary verbs, the 'question' and 'do insertion' transformational rules are adopted, requiring the placement of an auxiliary verb before the noun phrase comprising the subject of the question and, if no auxiliary verb is present, requiring that a variation of the verb 'do' be inserted in its place (for example, 'Where did mommy go?' (Dale, 1976)).

Although most of the syntactic rules of adult speech have been incorporated into the language of children aged about six years, some transformations have still to be acquired. Agreement between the case endings of personal nouns and verbs, for example, is not acquired until late. Similarly, the correct forms for the past tense of irregular verbs are not re-acquired for a long time. As was the case with inflections, over-regularisations also occur with transformational rules, particularly those associated with embedded clauses. Slobin (1966a) notes also that both children and adults have more difficulty in understanding passive forms (in which the object appears before the subject) than active forms. Sentences such as 'the doll is easy to see' for example, are not interpreted correctly by some children until well after six years of age (Carol Chomsky, 1969). It is only comparatively recently that a systematic attempt to inquire into the differences between adults and older children, in their comprehension and use of language, have been made. Consequently there is still much to learn, not only about the sequence in which linguistic skills are acquired, but also about how and why they develop as they do, and about the nature and importance of social-class and other subcultural differences in such

development.

3.6.8 Theoretical Perspectives:

As stated previously, explanations for the development of language have centred on two main schools of thought. The emergence of both reflect, in part, the observations that Man has an innate capacity to acquire language, but that the final linguistic code he adopts is that of his community, and is therefore transmitted culturally, or, more broadly, as a result of environmental influences. The core of disagreement between the two camps centres on the question, 'Is language development directed primarily by environmental or by genetic mechanisms?' A second, related, issue is whether Man has a specific 'Language Acquisition Device', rather than only a broad capacity for the development of symbolic thinking, of which language forms only one manifestation.

During the seventeenth and eighteenth centuries, philosophers of the Empiricist school argued that the mentality of a child began as a 'blank slate' ('tabula rasa') and that he acquired language as part of a general learning process directed by his environment. Rationalists, on the other hand, argued that language had biological foundations and that "experience is not so much to teach directly as to activate innate capacity" (Dale, 1976, p.96). The arguments between the two schools are currently reflected in the genetic versus environment controversy, common throughout many areas of psychology.

Much of the Empiricist tradition has been incorporated into the learning theory approach of American Behaviourism. First introduced by J.B. Watson (1913), this approach attempts to explain language development in terms of general learning principles underlying classical and operant conditioning. Based initially on the work of

Pavlov (1927), the conditioning model attempts to explain all learning in terms of stimulus, response and reinforcement. Modifications to this basic model were developed progressively and applied to language acquisition by authors such as Guthrie (1935), Hull (1943), Mowrer (1954) and, more recently, Staats (1968). Perhaps the most influential and detailed exposition of language development within a Behaviourist framework, however, has been made by B.F. Skinner in his book Verbal Behavior (1957). His operant conditioning model differs from classical conditioning, primarily in that it emphasises reinforcement of responses that are voluntarily emitted as a consequence of 'need states' or 'drives', rather than responses that are simply elicited by a particular stimulus.

According to the Behaviourist's view, early vocalisations are gradually shaped to conform to adult speech patterns by a continuous process of reinforcement. Mowrer (1954), for example, argues that all the sounds required for any language are emitted during the babbling stage. A child's acquisition of the phonological system of his native tongue therefore, he claims, involves a process of differential reinforcement primarily directed by his mother. Sounds that receive reinforcement are thought to increase in usage, while others, receiving no reinforcement, die out. In support of his view, experimenters have shown that the frequency of particular vocalisations can be increased if they receive a 'social reward' such as smiling or patting (Rheingold, Gewirtz and Ross, 1959).

Some learning theorists explained meaning in terms of the influence of words on behaviour. Language, in their view, was a form of behaviour that influences, and is influenced by, other behaviour, whether verbal or not. Phonemic combinations of words were thought to

acquire meaning (or, more accurately, to influence behaviour as either a stimulus or a response) gradually, by continuously being paired with specific objects, events or experiences that constitute the physical realities of a child's environment. When the word 'no' was accompanied by a slap as the child was engaging in forbidden behaviour, for example, a conditioned response between the word and the action was thought to be set up. Similarly, words such as 'doll' or 'byebye', used to refer to familiar objects or events, often after much prompting by parents or siblings, were thought to receive reinforcement, either through the attention they attracted or the communication they achieved (Herriot, 1970).

Behaviourists attempted to account for the development of syntax by arguing that grammatically correct and contextually accurate utterances were shaped by a process of reinforcement, similar to that directing phonological development. It could take the form of need satisfaction following effective communication; or parental approval accompanying 'correct' grammatical utterances; or simply of responses by parents indicating understanding or continuation of an idea. Imitation also was thought to play a role in shortening the shaping process. Staats (1968) argued that, rather than constituting an innate human quality, imitation was itself explainable in terms of the principles underlying operant conditioning. Skinner also notes "echoic behaviour (imitation) does not depend upon or demonstrate any instinct or faculty of imitation" (1957, p.59).

But in recent years, critics have assailed the Behaviourist's position for being too simplistic, and hence inadequate, as an explanation for the rapid development of linguistic capabilities in

young children. They claim its 'mechanistic' and 'atomistic' emphasis is incapable of accounting for the wide range of complexities associated with language development, and in particular fails to explain adequately language universals and creativity.

In his penetrating examination of Skinner's Verbal Behaviour, Chomsky (1959) criticises even the terminology of Behaviourism as it is applied to language development. Although they may be precise when applied to some restricted domains, terms such as 'stimulus', 'response', 'habit' or 'conditioning', he claims, are used too loosely when applied to the description of language. A 'response', for example, no longer has to be overt. It has become, instead, an unobservable 'disposition to respond'. Consequently, Chomsky suggests that such terms amount to little more than camouflage, hiding the inability of Behaviourism to describe and analyse language development adequately.

But his most trenchant criticism, as noted earlier, concerns the failure of Behaviourism to account for creativity in language. He concedes that a limited set of sentences and some associations between words and objects may be explained in terms of reinforcement alone, but maintains that the formation of new sentences is virtually ignored by Behaviourists, except in terms of vague references to 'analogy'. Language acquisition, he argues, is not simply a matter of learning a string of verbal responses, or a set of labels classifying abstract or concrete entities; rather, as noted previously, it involves the acquisition and implementation of underlying regularities or grammatical rules that govern phonetic sequences and syntactic transformations. It is only once such rules have been acquired that a native speaker can distinguish grammatical from ungrammatical utterances.

Criticisms of Behaviourism extend beyond the creative aspects of language, however. Dale (1976) notes, for example, that at the phonological level, the range of sounds emitted during the babbling stage is not as extensive as was previously thought. Hence, not all the sounds of English or any other language are produced. Phonological development, therefore, involves a process in which sound is added, as well as eliminated. Dale concedes that learning theory may be able to account for the increase in frequency of already existing vocalisations because of the reinforcing effect of 'social rewards', but he maintains that it cannot account for the acquisition of new phonemes. The transition from phonetic to phonemic development also appears not to be as gradual as suggested by learning theorists, but marked by distinct discontinuities.

Other criticisms also point to the limitations of reinforcement as the sole principle underlying language development. Lefrançois (1975) notes that learning theory cannot account for the extreme rapidity with which language is learnt. Migrant children, for example, pick up the language of their new country very quickly 'from the streets' and mainly from peers, rather than from parents, and without the intensive training programme learning theory would suggest is necessary. He also notes that children do not make the number and kind of mistakes that, according to learning theory, need to be narrowed and refined. For example, as already pointed out, irregular words, previously used correctly, are suddenly produced with systematic errors, suggesting that their production is related to the acquisition of a set of linguistic rules, rather than the shaping of a specific 'response'. In addition, Dale (1976) reviews some research which casts doubt on the view that effective communication has a reinforcing effect and also notes that

ungrammatical utterances by young children are often sufficient to communicate with parents, thereby bringing about the relief of a 'need state'. He also notes that attempts at direct instruction are usually failures, indicating that, no matter what the reinforcement, a child cannot develop new language structures until he is biologically ready to do so.

Further evidence against a purely Behaviourist interpretation of language development comes from the existence of language universals. At the phonological level, for example, Dale (1976) notes that, although the range of phonetic variations emitted during the babbling stage is not as wide as was originally thought, the babbling of children from different language communities is virtually indistinguishable. Jakobson's work, discussed earlier, similarly suggests that universal principles underlie phonemic acquisition.

Along similar lines, McNeill (1966) claims that, although specific transformational rules marking the acquisition of syntax may be learnt, their general form has universal characteristics. Hence, the operations performed in various languages to transform deep structure into surface structure include such processes as adding, deleting, substituting and permuting. Individual elements such as nouns, verbs, modifiers and function words also usually occur to fulfil similar semantic roles. Universal grammatical relations, such as modifier-head, or between a verbal element and adjuncts (such as subject, direct object or oblique object) occur often in sequences that reflect universal tendencies and variations (Langacker, 1973). Forms such as declaratives, interrogatives, negatives and imperatives similarly are found universally, and Bellugi (1965) has shown that the sequence in which specific transformations are acquired also tends to

be regular. McNeill (1966) argues that the child's first utterances represent deep structure and that surface structure appears only after the rules governing transformations have been acquired. This is contrary to what might be expected according to learning theory, which claims that surface structure as it occurs in adult language is what receives reinforcement, implying that it should appear first.

The work of Clark (1973), Nelson (1973), Brown (1970) and Slobin (1970) noted previously, also indicates semantic regularities in the development of language. Although no universally accepted theory of meaning has yet been formulated, most that have been attempted in recent years incorporate the concept of semantic features (e.g. Katz and Fodor, 1963). Clark (1973), as noted previously, proposes that words gradually acquire meaning as semantic features are acquired. More general features are acquired first, followed by a sequential acquisition of more specific features. The word 'brother', for example, may be confused with the more general term 'boy', before additional features identifying it more precisely are acquired. Such a view has similarities with Piaget's analysis of cognitive development generally, and may be interpreted as reflecting the adaptation of internalised schemata to accommodate the assimilation of new information.

Generative grammarians also are critical of the implication that the child has a relatively passive role in language development, contained in the learning theorists' preoccupation with external forces that impinge on him. In line with the Rationalist viewpoint, they argue instead that language acquisition is an active, biologically-based process. They emphasise man's unique capacity for processing linguistic data, independently from the environment.

Lenneberg (1967), for example, gives many illustrations of the relationship between certain maturational indices of the brain and the onset of language. He suggests that there are critical stages at which a child is able to abstract and apply regularities and relations gleaned from his linguistic environment. These stages, he suggests, are the product of evolution and are related to the development of the brain, both phylogenically and maturationally. In support of his view, he notes how difficult it is for older people to learn a new language, in contrast to the comparative ease with which young children acquire both their native tongue and second or third languages.

As indicated previously, such observations have led some linguists to suggest the presence of the Language Acquisition Device (LAD) (Chomsky, 1965; McNeill, 1966). Lefrançois (1975, p.186) refers to it as a "prewired neurological mechanism" which makes the child "predisposed to learning the forms of a language". Chomsky similarly suggests that the LAD forms a kind of 'genetic blueprint' that determines the structure of language systems. Slobin (1966b) describes the LAD more as a process than a product. He suggests that it represents a child's inborn predisposition to apply a set of strategies and principles to abstract regularities from the linguistic data around him and to form them into grammatical rules. Clearly, a great deal of language development appears tied to maturational processes.

But although much recent evidence weighs against a purely Behaviourist interpretation of language development, the importance of environmental influences should not be overlooked. We need to know more, not only about the nature of language systems used by various groups, but also about the way in which children are exposed to them.

MacWhinney (1978), for example, reports research indicating that the commonness of utterances may play a crucial role in determining whether the correct forms are learnt by rote, by analogy or by the acquisition of transformational rules. Dale (1976) also notes that, when talking to their children, mothers tend to use grammatical constructions that become progressively shorter and simpler with the decrease in age of the child. Older children also tend to use simpler forms when talking to younger children than when talking to peers or adults. Young children may play an active role in the simplification of their linguistic input, however, by being selectively attentive to simpler grammatical forms. Twelve-month-old children, for example, attend to intonation patterns more readily than to other grammatical structures, and two- and three-year-olds show a preference for simpler forms of speech than those used in adult conversation. Generally, however, parental speech is still more complex than the child's own language, and therefore may play a role in maintaining attention, although the impact of specific kinds of parental feedback, such as prompting, echoing or expansion on grammatical development, is unclear.

3.7 A COGNITIVE PERSPECTIVE

With their reaction against the Skinnerian view of language acquisition, many contemporary linguists also reject the idea that language development is a branch of more general cognitive processes, and argue that it has its own specific biological foundation. They claim that, although ideas may need to exist before they can find linguistic expression, such ideas cannot be expressed without the acquisition of specific linguistic mechanisms. Evidence for the

existence of a Language Acquisition Device, however, is inconclusive, and the difficulty in distinguishing between syntactic and semantic components in grammar suggests that the distinction between these linguistic mechanisms and broader cognitive mechanisms may be artificial. On the other hand, much of the research is readily interpreted within the framework of Piagetian psychology (Herriot, 1970).

Within such a framework, language acquisition may be viewed as a process in which the child actively seeks interaction with his language environment at a level that is appropriate to his stage of development. The reinforcement or feedback he receives from parents or peers forms part of this process and the linguistic data he attends to are determined by his level of development. The semantic importance of perceptual items and relations in a child's initial words and sentences reflect his sensorimotor organisation of his world. His adoption of the syntactic and phonological rules and structures of language, therefore, simply may represent another arm of his (essentially cognitive) regularisation and systematisation of his environment. But the power of this system, once acquired, to further enhance cognitive development, particularly in the concrete and formal operational periods, may be underestimated by Piaget. An individual's exposure to the 'reconstructions of reality' favoured by his community may make his own 'reconstructions' easier, more rapid, more directed and more widely based than is possible through other forms of environmental interaction.

The cognitive reality of linguistic structures such as those described by Chomsky in his theoretical model, however, is unclear.⁽¹⁾

(1) Herriot (1970) provides an excellent discussion of these issues and of relevant research.

What, for example, is the relationship between his 'deep structure' and Vygotsky's and Piaget's 'inner speech'? We also need to know more about the relationship between Piaget's 'schema' and the components of Chomsky's 'competence' and 'performance'. It may be that speech production requires the development of more complex schemata than does comprehension, though whether the different competencies that may underlie expression and comprehension are related hierarchically or are qualitatively different is unclear.

Attempts by authors such as Nurcombe (1976) (see Chapter 2) to integrate elements of both Chomsky's and Piaget's approaches into a unified theoretical framework are valuable adjuncts to cross-cultural psychology. By incorporating Chomsky's emphasis on universals with Piaget's emphasis on similarities between children in their adaptive mechanisms, such attempts highlight the importance of viewing language and conceptual abilities as part of a maturational process involving the interactions between Man and his environment. At the same time, however, individual and group differences in performance (as emphasised in American Psychology) continue to have important implications for educational practice and social policy, and hence, should not be overlooked. An advantage of models of 'Potential, Competence and Performance', as espoused by Nurcombe, lies in the insights they offer into the distinction between observation and inference concerning variations in performance between individuals or between groups. In the light of such considerations, more informed judgements concerning the nature, status and cognitive utility of the English spoken by many Aborigines can be made. We now pass on to a consideration of research relating to Aboriginal English and to Aboriginal psycholinguistic abilities.

3.8 ABORIGINAL ENGLISH

As happened elsewhere when Europeans and indigenes in other lands came into contact, a pidgin language emerged in Australia as a medium of communication between the European arrivals and Aborigines. Baker (1965) suggests that its vocabulary was predominantly a mixture of Anglicised Aboriginal words and 'Aboriginalised' English words, with the Aboriginal component deriving primarily from New South Wales and Victorian languages. It became widespread as European settlement progressed and as Aborigines speaking different vernaculars increasingly came into contact with each other. Baker suggests that it may even have influenced other pidgins spoken throughout the Pacific, but his view is not generally shared by later authors who note few commonalities between it and contemporary Pacific creoles and dialects, such as Neo-Melanesian (Turner, 1972; Flint, 1968).

On the other hand, it appears for a time to have exerted some influence on the speech of White Australians and may constitute a primary source of English variations still spoken in many Aboriginal communities. Its influence on White Australian English was restricted mainly to vocabulary, however, and it may be declining in the face of new pressures, particularly from American English. But its influence on Aboriginal English forms appears to have been deeper, involving syntax and phonology, as well as vocabulary, and hence may be more lasting. These syntactic and phonological characteristics in turn may reflect features common to traditional Aboriginal languages (Turner, 1972).

Whatever their specific origins, distinctive dialects of English spoken by Aborigines have been identified and described in Queensland (Flint, 1968, 1973; Dutton, 1969, 1970), Western Australia

(Douglass, 1968) and the Northern Territory (Jernudd, 1971). They vary from Standard Australian English in lexis, syntax and phonology.

Differences between Queensland Aboriginal English forms and Standard English, for example, include the omission, or uninflected use of, the verb 'to be' (that a big one; I be cold); the inclusion of a marker at the end of statement form to indicate a question ('e⁽¹⁾ in trouble, eh?); omission of 's' to indicate plural or possessive forms; and the inclusion of general terms such as 'la' in place of more specific terms such as 'in' or 'on' (Dwyer, 1976; Somer, 1974).

Following overseas trends, the question persists, however, as to whether these variations represent a substandard or simply a non-Standard form of English. Echoing the Labov versus Bereiter-Engelmann debate referred to earlier, linguists tend to argue that Aboriginal English forms represent legitimate dialects, linguistically equivalent to Standard English (Flint, 1968); while psychologists and educators maintain, in general, that they represent substandard forms that require remediation if they are not to inhibit the cognitive development of their speakers (Nurcombe and Moffitt, 1970; Craddock, 1974). To some extent, the controversy reflects the restricted focus of various disciplines, with linguists examining language as a system and psychologists exploring the use to which the system is put in cognitive tasks. Hence it is by broadening the focus to include the contributions, discussed previously, of several disciplines, that deeper understandings may be acquired of the nature and utility of these language variations. As indicated in Chapter 1, the integration of perspectives offered by several disciplines represents a major objective of this work.

(1) 'e' is used by many Aborigines in place of 'he' or 'she'.

Some socio-linguistic evidence, for example, indicates that the distinction between language style and dialect, may be less clear in Aboriginal usage than in White Australian usage. Flint (1968), for instance, has suggested that many Aborigines experience a diaglossic situation in which two systems of English act as functional complements of each other to suit varying social demands. Somer (1974) argues that these 'structural variants' serve as endpoints along a language continuum linking Standard English and the colloquial dialect. Expanding this view, Dutton (1970) observes that, although the local English variant serves as an efficient communicative device between native speakers, a form that more closely approximates Standard English is adopted when these individuals are conversing with Europeans, especially those in authority. Specific language forms, approximating dialectical variations, therefore appear to be associated with distinct usages.

Taken further, this close link between a given language form and its function may help explain why bilingual children respond differently on tasks when given the same instructions in different languages (Cawte and Kiloh, 1967; Keats and Keats, 1974), and why speakers of non-standard dialects perform academic tasks no better, and sometimes worse, when their local dialect, rather than Standard English, is used (Marwit and Neumann, 1974; Kirk and Hunt, 1975). The unfamiliar nature of the demands placed on the local dialects, as much as their form, may impede performance on such tasks.

Labels such as 'substandard' when applied to non-standard dialects, therefore, may be misleading, as well as pejorative. They ignore non-linguistic influences impeding communicative performance in formal test situations; fail to distinguish between expressive and

receptive advantages of varying language forms; ignore the rich multifaceted role of language which transcends its importance in any one sphere (as in academic tasks); and disregard the suitability of particular variations for the functions they serve. Such labels also ignore the universality of linguistic mechanisms shaping all languages, and the consequent logical equivalence of structures underlying alternative dialects. Together with the dynamic and adaptive nature of language, particularly with regard to lexis, these mechanisms give such dialects the potential to develop into functional equivalents of Standard English if faced with similar requirements. In this light, then, a more appropriate question than the one posed in Chapter 1, concerning whether non-standard dialects are equivalent to Standard English as cognitive tools, may be, 'What social and psychological function is each called upon to serve?'

Whether for reasons of maintaining a given political status quo, or simply for convenience, Standard English has emerged as a standardised form of communication in English-speaking communities, dominating such fields as science, literature and commerce. Perhaps inevitably, therefore, it has evolved to function adequately in these areas. Hence it should not be surprising that it may be more suited for such tasks than non-standard forms that are unlikely to have faced the same requirements. But, equally importantly, Standard English may be unable to compete effectively with local or 'restricted' forms in other contexts. In more intimate situations, for example, in which communicants share much background knowledge and experience, contextual information may, as Bernstein (1961) suggests, so complement their language code that precise articulation of meaning is unnecessary. An elaborated code in such circumstances, therefore, would be superfluous

as well as inappropriate. Indeed, its 'distancing' effect even may be resented as the mark of an outsider.

But even if Aborigines valued language as highly as do middle-class Europeans for its potential precision as a tool of communication, and experienced a similar press for its development, they would still be disadvantaged relative to Standard English-speakers unless use of their dialect was associated with, and oriented towards, tasks for which Standard English is customarily used. Given the weight of historical and sociological forces that have thrust Standard English into its position of pre-eminence, it is likely to remain there, unassailed, in the foreseeable future. A problem for educators, therefore, is to ensure its acquisition by non-standard speakers so that these groups may gain fair access, if they so wish, to fields of endeavour for which Standard English is suited and, perhaps, essential.

3.9 ABORIGINAL PSYCHOLINGUISTIC ABILITIES

Studies of the psycholinguistic abilities of Aboriginal children, when Standard English is the medium for their expression, indicate that very few are in a position to exploit its communicative potential. Most studies in this area have employed the Peabody Picture Vocabulary Test (PPVT) or the Illinois Test of Psycholinguistic Abilities (ITPA) (Teasdale and de Vries, 1976) and can be grouped under three headings - exploratory, preschool evaluation, and diagnostic - each of which is discussed below.

Exploratory studies usually have been designed either to determine the level of performance of Aboriginal children on selected language tests relative to United States norms, or to the performance

of high or low-socioeconomic White Australians; or to investigate the relationships between their language test performance and other variables (such as environmental characteristics or their performance on other tests, usually of cognition).

These studies demonstrate that Aboriginal children consistently perform significantly below United States norms⁽¹⁾ and significantly less well than high-socioeconomic White Australian children on auditory-vocal tests requiring Standard English (Bruce et al., 1971; Teasdale and Katz, 1968; Nurcombe and Moffitt, 1970; Foggitt et al., 1972), but that their performance is not always significantly worse than the performance of low-socioeconomic White Australian children (Teasdale and Katz, 1968). The performance of Aboriginal children on these tests also has been related to their level of contact with White Australian society (de Lacey, 1972) and with maternal word knowledge, but, in contrast to the situation for low-socioeconomic White children, not with maternal language style (Teasdale, 1975). Foggitt, Mangan and Law (1972) claim that their research suggests that language coding structures may influence performance on the Queensland Test. De Lacey (1972) indicates, however, that the degree of correspondence between the cognitive test scores and the language test scores of Aboriginal children may be a function of the level of contact these children have with White Australian society.

Concluding from such research that Aboriginal children tend to rely less on auditory vocal channels of communication than do their White peers, at least as far as Standard English is concerned, some researchers have developed and evaluated 'compensatory' preschool

(1) Teasdale and Wray (1975) caution that these norms may be inappropriate for Australian children. See Chapter 5 (5.3.5).

programmes designed to improve the Standard English competence of these children. In addition to the one at Bourke noted in Chapter 2, others have been reported on the North Coast of New South Wales (Harries, 1967, 1971), in Queensland (Alford, 1970, 1972; Hart, 1973), in Victoria (Scott and Darbyshire, 1973), and in South Australia (de Vries, Wray and Teasdale, 1974; Teasdale and de Vries, 1976).

As in the case of American antecedents of these early intervention programmes, evaluative studies usually show high initial gains in test performance by the children who attend them, followed by a deterioration in performance with advancing years at school. In their survey of the outcomes of six major preschool programmes for Aboriginal children, for example, Teasdale and Whitelaw (1979) conclude that, despite some positive indications (Nurcombe and de Lacey, 1976), long-term cognitive and language gains by Aboriginal children as a consequence of such programmes have yet to be demonstrated satisfactorily.⁽¹⁾ More recent evaluations in the United States, however, indicate that a widespread recovery of early losses may occur during adolescence (Brown, 1978).⁽²⁾

Diagnostic studies represent an extension of these preschool evaluations. In their discussion of the limitations and potentials of the ITPA, Teasdale and de Vries (1976) argue that most studies of minority groups have overlooked the diagnostic role for which the ITPA was originally designed. Hence, in addition to reporting findings which demonstrate the superiority, in terms of language development, of a preschool language programme based at Port Lincoln, over a traditional

(1) They do note a wide range of other positive outcomes of varying types of preschool programmes, however.

(2) As noted in Chapter 2 (footnote, p.85), preliminary findings by Ronan (forthcoming) indicate that a similar phenomenon may be occurring with Bourke Aboriginal children.

programme centred on Port Augusta in South Australia, they highlight specific difficulties Aboriginal children may be having, on either an individual or a group basis, and suggest possible remedial action. Their important qualifications concerning ITPA usage and interpretation are discussed in Chapter 5.

Few attempts at assessing Aboriginal psycholinguistic abilities in their own dialects of English appear in the literature, although studies by Hart and Drinkwater represent important steps in this direction. Hart (1973) analysed and compared the recorded speech of Aboriginal four-year-olds and White two- to four-year-olds. But his study was designed primarily to determine baseline Standard English structures to be taught to Aboriginal children in a preschool language programme and hence concentrated on identifying differences between the languages of both groups in such characteristics as their syntactic transformations and the frequencies of words and phrases, and not on their semantic content. In contrast, Drinkwater (1972, 1973, 1976b) used semantic content as a basis for categorising the responses of Queensland Aboriginal and White children and teenagers on word association tests. Her results indicate that, although the proportion of paradigmatic responses⁽¹⁾ and the range of conceptual categories they cover are similar for both groups, the White samples tend to generate a greater number of meaningful associations per stimulus, especially when abstract concepts are involved. Drinkwater concludes that vocabulary limitations associated with her Aboriginal subjects may be responsible for these differences. The semantic coding systems of both groups, however, appear to be equally well structured.

(1) Responses belonging to the same form class (e.g. love-hate). They differ from syntagmatic (or sequential) responses (e.g. play-football).

The emic quality of the studies by Hart and Drinkwater represents an important extension to assessments of Aboriginal psycholinguistic and conceptual abilities. The utilisation by Hart of modern technology to capture the natural language of his subjects offers the potential for analyses in the Labov tradition, free from motivational and situational constraints. Not only may such techniques, along with those used by Drinkwater, assist in the identification of competencies favoured in Aboriginal subcultures, but they also may help in determining the contexts in which these competencies find expression. In this way, both the language systems of Aborigines speaking non-Standard English dialects, and the uses to which these dialects are put, may be more clearly understood. The insights obtained from such emic procedures may in turn assist the reformulation, or at least the reinterpretation, of sophisticated theoretical models such as those offered by Osgood (1957a, 1957b) and Piaget (1950) which, if shorn of their ethnocentric overtones, may become more truly etic in nature and, hence, of more value to cross-cultural researchers.

3.10 CONCLUSION

This Chapter has augmented the earlier discussion (Chapter 2) on Aboriginal cognition by exploring in detail issues and research that have a bearing on the nature of language and its relationship to thought. The Chapter commenced with a series of questions concerning the nature and representational utility of some English dialects spoken by minority groups in general and Aborigines in particular. On the basis of the evidence presented, some tentative conclusions regarding these issues may now be drawn.

Language appears to operate as an adaptable tool to serve the universal human need for detailed communication. The nature of this need helps shape the semantic content of language and, therefore, its precision as an instrument for conceptual articulation and transmission. It also appears to tie specific language forms to particular social contexts. Given the assumption that the nature of this communicative need is likely to vary between subcultural groups according to their various ecologies, perspectives and value orientations, it should not be surprising that cognitive and linguistic competencies fostered by Western middle-class groups may not be duplicated by other groups. Indeed, this seems to be the case.

The weight of evidence presented in this Chapter suggests that minority groups, and in particular Aborigines, tend not to exploit the potential of their dialects for the transmission of precise elaboration of meaning in the way the middle class exploits Standard English. But this is not to suggest that non-middle-class groups are cognitively inferior, nor that their language systems are inferior. Rather, this evidence is interpreted as indicating that, as a result of different sociocultural demands, both the conceptual categorisations and manipulations of Aborigines manifest in the semantic dimension of their language systems, and the social contexts associated with the expression of these competencies, are less attuned to the needs of a middle-class-dominant, high-technology culture, than to the needs of their own subculture.

More specifically, the evidence indicates that the elaborated code of Standard English has evolved to include 'tags' that reflect the delimitations of 'semantic space' required in such fields as literature, science and commerce, as well as syntactic mechanisms for relating these

'tags' in ways appropriate to the demands of such fields. As a consequence, it has evolved as an especially useful tool for communicative precision, which depends less on contextual clues or shared background knowledge of communicants to transmit information, than do non-standard dialects, or restricted codes.

But an individual's capacity for explicitness of expression should not be confused with his capacity to grasp logical relations. The bulk of evidence presented in this Chapter indicates clearly that, contrary to Bruner's assertions, language is neither essential for the development of logical structures, nor capable of contributing directly to their development. As well, the logic underlying the syntactic transformations of both non-Standard and Standard forms of English appears to be equivalent. Non-standard dialects, therefore, are not inferior language systems, but rather, are functional outcomes of the communicative needs of their speakers.

Nevertheless, Standard English may contribute indirectly to the development of specific logical structures, by assisting in the selection, and perhaps, the storage and retrieval of information. As we have seen in Chapter 2, the character of attributes attended to in a given situation may vary greatly between groups. Hence, the nature of the information abstracted from the environment and represented internally as cognitive structures by such groups is likely to vary. The elaborated code of Standard English may contribute to this process, therefore, by 'cuing' its speakers into attending selectively to forms and levels of conceptual differentiations and co-ordinations that are advantageous in contemporary mainstream society. Logical equivalence of the syntactic procedures for transforming deep structure into surface structure, therefore, does not imply conceptual equivalence of

the content of deep structure. As evidenced in Chapter 2, more broadly based sociocultural influences appear to be contributing to this content. Thus for minority groups, this content is likely to reflect the dictates of their subcultures.

A model of such a subculture as it relates to Aborigines is examined in Chapter 4.

CHAPTER 4

A CULTURE OF POVERTY?

4.1 INTRODUCTION

Continuing the eclectic orientation of this work, and in recognition of the crucial role of environmental influences on the development and expression of competencies required for successful school performance, this Chapter examines the social background of Aborigines from an anthropological/sociological perspective. In particular, it investigates the nature and appropriateness of a subcultural model which postulates that the sociocultural and psychological characteristics of many Aboriginal groups have a self-perpetuating, adaptive quality and that these characteristics are similar to those displayed by other groups in similar circumstances.

The last ten to fifteen years have witnessed an upsurge in the number of publications by sociologists, historians and others, that deal with the social history and cultural background of contemporary Aboriginal Australians. The rapid growth in this literature echoes similar trends overseas towards an increasing awareness of the difficulties experienced by many minority groups in modern industrial societies. As was pointed out in Chapter 1 (1.3.2), it also reflects in some measure a response by government policy makers in Australia to international and local criticisms of the position of Aborigines in Australian society and to increasingly vociferous demands by a politically more-aware generation of Aborigines for a redress of past imbalances, for recognition of their cultural heritage and independent identity, and for equality of status and economic and educational opportunities. Until recently, as also indicated in Chapter 1, this

response has taken the form of increased government expenditure on Aboriginal welfare. Part of this expenditure was directed towards obtaining comprehensive and detailed information on the nature of the problems experienced by Aborigines as a preliminary to the development and implementation of policies designed to alleviate these problems.

Among the most consistent findings to emerge from the many reports and studies that were consequently undertaken, was the prevalence of poverty among Aborigines. In particular, the Commission of Inquiry into Poverty in Australia, sponsored by the Federal Government, has highlighted, in a number of publications, the severity and extensiveness of poverty experienced by Aborigines in both rural and urban settings. Studies of Aborigines and Islanders in Brisbane (Brown et al., 1974) and of Aborigines in Adelaide (Gale and Binnion, 1975), for example, both report that 55% of the 'income units' included in the investigations were either below the poverty line or only marginally (< 20%) above it. This contrasts with a figure of 17.9% poor or marginally poor 'income units' for the Australian population as a whole (Henderson, 1975). Rural Aborigines appear to be even worse off economically than their urban counterparts (Gale, 1972).

So persistent and pervasive is poverty in the lives of such a large number of Aborigines that several authors have suggested that they have evolved a culture of poverty.⁽¹⁾ This concept derives from the writings of Oscar Lewis, an American anthropologist, who pioneered the expansion of anthropological inquiries into the realms of poor communities in modern societies. Noting cultural similarities between

(1) See, for example, Rowley (1970b), Lippmann (1973), Havenhand (1974) and Nurcombe (1976).

these communities in areas as diverse and widespread as London, Glasgow, Paris, New York, Puerto Rico, Mexico City and Mexican rural villages, he postulated that they may represent a common human response to conditions of poverty that is passed on from one generation to the next. Poverty, he suggests "becomes a dynamic factor which affects participation in the larger culture and creates a subculture of its own" (1959, p.2). He called this subculture a 'culture of poverty' and, in a series of revolutionary anthropological publications, progressively developed and elaborated his view that it possessed its own internal structure, was self-perpetuating and served an adaptive function.

Popularised by Harrington (1962) in his book The Other America, Lewis' concept soon became the subject of considerable controversy. Harrington used Lewis' term rather loosely to describe the situation of the poor in the United States. Claiming to be guided by two principles, "to be as objective as possible about the figures [and] to speak emotionally in the name of the common humanity of those who dwell in the culture of poverty" (p.127), he argued forcefully that the poor comprised forty to fifty million Americans, or about a quarter of the population, and that they were caught up in a "vicious circle of poverty" (p.22) from which they were unlikely to escape without considerable help from the larger society. Poverty in the United States, he wrote, "is a culture, an institution, a way of life" (p.22) which generates "a language of the poor, a psychology of the poor, a world view of the poor" (p.23). His arguments and emotive style proved to be compelling. His book has been widely credited with having had an important influence on the development of the 'war on poverty' policies of successive federal administrations in the United States throughout the 1960s (Donovan, 1967).

But, towards the end of the decade, critics charged that these policies had failed to overcome poverty in the United States. It was asserted that Lewis' concept put the onus of poverty on the poor, rather than on the institutions of society, and that consequently the 'war on poverty' focused on eliminating poverty by changing the poor, rather than by changing social structures that may give rise to poverty (Leacock, 1971). Such criticisms were similar to, and overlapped with, criticisms of the cultural-deficit model noted in Chapter 1, which characterised this model as placing the onus of educational failure on the families of minority children, rather than on the schooling they received. As controversy surrounding Lewis' concept grew, he was accused of being unclear, inconsistent and illogical in his formulations and unethical with regard to their publication (Leeds, 1971).

While some of these criticisms have proven useful in exposing limitations and gaps in Lewis' model, others have not. Rather, they have obscured the issues involved. Frequently criticisms were not based on a dispassionate analysis of Lewis' original concept, but represented affective reactions, either to simplified caricatures of it, as presented by Harrington, or to unrepresentative segments of it that were taken out of context. The emotional atmosphere originally generated by Harrington and others, and nurtured by political hostility between later supporters and opponents of Lewis' model, frequently led to exaggerations, distortions and unfair treatment of his work. Contrary to the claims of some of his critics, for example, Lewis, as we shall see, acknowledges the importance of the influences of the larger society on the continuity of the subculture; points to the positive characteristics of the subculture; and argues that only some of the poor belong to it.

In view both of its controversial nature and widespread use in the description of the sociocultural environment of Aboriginal Australians, Lewis' concept is considered in some depth in this Chapter. Commencing with a detailed description of Lewis' model, the discussion progresses to a more thorough examination of criticisms that have been directed at it, before investigating the appropriateness of its application to Aboriginal Australians. Liberal use of quotations is made in the description of the concept, in an attempt both to capture the 'flavour' of Lewis' work (as was attempted in Chapter 2 with Porteus' work), and to ensure greater accuracy and authenticity than is likely if paraphrasing alone was to be employed. By so doing, the risk of misrepresenting his precise meanings, as has occurred so frequently in the past, should be reduced. The Chapter concludes with a summary statement relating to the utility of Lewis' concept in an Aboriginal context, along with some empirical and theoretical questions that remain outstanding.

4.2 THE CULTURE OF POVERTY

According to Lewis, the culture of poverty:

... is the label for a specific conceptual model that describes in positive terms a subculture in Western society with its own structure and rationale, a way of life handed down from generation to generation along family lines ... It is not just a matter of deprivation or disorganization, a term signifying the absence of something. It is a culture in the traditional sense in that it provides human beings with a design for living, with a ready made set of solutions for human problems and so serves an adaptive function. This style of life transcends national boundaries and regional and rural-urban differences within nations. Wherever it occurs, its practitioners exhibit remarkable similarity in the structure of their families, in interpersonal relations, in spending patterns, in their value systems and in their orientation in time (1966, p.19).

These cross-national similarities, he suggests, "are examples of independent invention and convergence. They are common adaptations to common problems" (1965, p.x1).

Lewis elaborates his concept by explaining that the culture of poverty is:

... both an adaptation and a reaction of the poor to their marginal position in a class-stratified, highly individuated, capitalistic society. It represents an effort to cope with feelings of hopelessness and despair that arise from the realization by members of the marginal communities in these societies of the improbability of their achieving success in terms of the prevailing values and goals. Many of the traits of the culture of poverty can be viewed as local spontaneous attempts to meet needs not served by institutions and agencies of the larger society, because the poor are not eligible for such service, cannot afford it or are ignorant and suspicious (1966, p.21).

Contrary to Harrington's assertion, however, Lewis argues that not all the poor belong to the culture of poverty; "the economic traits are necessary but not sufficient" (1965, p.xliv). He points out, for example, that many preliterate groups have developed highly organised, self-sufficient and satisfying cultures, despite considerable material poverty (1966, p.23). Other groups similarly not qualifying as members of the culture of poverty, despite their poor circumstances, include, he suggests, lower-caste Indians, members of Socialist States and the Jews of Eastern Europe before World War II. He concludes:

We find that, in 'primitive' societies and in caste societies, the culture of poverty does not develop. In socialist, fascist and highly developed capitalist societies with a welfare state, the culture of poverty tends to decline. I suspect that the culture of poverty flourishes in, and is generic to, the early free-enterprise stage of capitalism and that it is also endemic to colonialism (1965, p.xlvi).

A key element, in addition to poverty, that characterises the culture of poverty is its lack of organisation and of a unifying ideology that encourages the development of a positive identity and a sense of worth among its members. Lewis notes that:

If we think of the culture of poverty primarily in terms of the factor of identification with the great tradition of that society, or with a newly emerging revolutionary tradition, then we will not be surprised that slum dwellers with a lower per-capita income may have moved further away from the core characteristics of the culture of poverty than others with a higher per-capita income (1965, p.xlvi).

Extending his theme, he argues that "any movement that gives the poor a sense of solidarity and identification destroys the social and psychological core of the culture of poverty" (1968, p.20).

So important are the characteristics of non-integration and lack of a strong, positive sense of identity in the culture of poverty, that a more appropriate label for it may be 'culture of the dispossessed'. For although the dynamics of poverty may, over time, generate many of the traits of this subculture, the subjective experience of poverty, marked by feelings of non-belongingness and helplessness that typify members of the culture of poverty, as well as the material poverty itself, appear to be outcomes of the dynamics of dispossession from one cultural heritage and only marginal admission to another. (1)

Lewis argues that, although a variety of historical contexts may give rise to a culture of poverty, it "is likely to be found where imperial conquest has smashed the native social and economic structure and held the native, perhaps for generations, in servile status" (1966, p.24). Consequently, he argues, the "most likely candidates for the culture of poverty would be people who came from the lower strata of a

(1) The probable nature of these dynamics are discussed in Chapter 6.

rapidly changing society and who are already alienated from it" (1966, p.24). In some respects it represents an attempt by them "to utilize and integrate into a workable way of life the remnants of beliefs and customs of diverse origins" (1961, p.xxvii). Despite the change in emphasis implied by this new label, however, the traits of the subculture, once it has become established, remain the same as described by Lewis. Poverty still forms an essential ingredient of the subculture and, as both the poverty and the marginality are mutually reinforcing, only minimal improvement in clarity would be gained by changing the label. In addition, the emphasis on poverty rather than marginality leaves greater scope for the inclusion of groups who are ethnically and historically members of the host society. Thus Lewis' term has been retained for this discussion.

Once established, the culture of poverty persists, Lewis argues, because of its effects on children born into it. He acknowledges "that the main reasons for the persistence of the subculture are no doubt the pressures that the larger society exerts over its members and the structures of the larger society itself", but argues that these are not the only reasons, for the "subculture develops mechanisms that tend to perpetuate it, especially because of what happens to the world view, aspirations and character of the children who grow up in it" (1968, p.20). More specifically, he asserts that "by the time slum children are age six or seven they have usually absorbed the basic attitudes and values of their subculture and are not psychologically geared to take full advantage of changing conditions or increased opportunities that may occur in their lifetime" (1968, p.6). Consequently, he argues, the culture of poverty is more difficult to overcome than material poverty alone. "The economic opportunities, though absolutely essential and of the highest priority, are not sufficient to alter basically or

eliminate the subculture of poverty" (1968, p.20). It may take several generations for this to occur "even under the best of circumstances".

The specific conditions that, together, give rise to the culture of poverty include the following:

- (1) cash economy, wage labour and production for profit;
- (2) high rates of unemployment and under-employment for skilled labour;
- (3) low wages;
- (4) lack of voluntary, or government-imposed, provision for political, social or economic organisation of the poor community;
- (5) a bilateral kinship system based on the nuclear family;
- (6) the existence of a set of values in the dominant class that stresses thrift, the accumulation of wealth and property, and upward mobility; and which explains poverty primarily in terms of personal inadequacy and inferiority in the individual.

(Lewis, 1966, p.21)

Although Lewis does not enumerate them, he claims that the culture of poverty is characterised by seventy interrelated social, economic and psychological traits. In his later work (1968, p.11) he cautions that, when considering these characteristics, some qualifications should be kept in mind:

- (1) The traits fall into clusters and are functionally related within each cluster;
- (2) Many of the traits of different clusters also are functionally related;
- (3) It is the conjunction, function and patterning of the traits that define the culture of poverty, not single traits considered separately;
- (4) The culture of poverty represents a statistical profile. Families belonging to it merely have more of its distinguishing characteristics than do other groups;
- (5) Systematic variations that reflect differing national contexts are likely to occur between profiles of the culture of poverty.

Bearing these considerations in mind, and referring primarily to his South American data, he describes the culture of poverty from four points of view: (1) the relationship between the subculture and the larger society; (2) the nature of the poor community; (3) the nature of the family; and (4) the attitudes, values and personality of the individual. A summary of these descriptions, based on several of his publications, is presented below (Lewis, 1959, 1961, 1965, 1966, 1968).

4.2.1 Relationship to the Dominant Society:

As noted previously, a crucial characteristic of the culture of poverty is the non-integration of its members into broad areas of the larger society's institutional⁽¹⁾ life. An important manifestation of this lack of involvement is their minimal participation in major social organisations. They have low levels of education, are not members of trade unions or political parties, and make little use of department stores, banks, hospitals or cultural facilities such as museums or art galleries. Their involvement with organisations such as welfare agencies, jails or the army does little to discourage the traits of the culture of poverty, and, as noted previously, may perpetuate both their poverty and a sense of helplessness.

Poverty, apathy, fear, suspicion, discrimination, segregation, or the development of alternative means for satisfying needs or interests not served by the larger society are all elements that may combine to discourage voluntary participation in the institutional life of the dominant society. Typically, members of the culture of poverty hate the police and dislike and mistrust government officials

(1) Lewis does not define what he means by institutions, but his writings imply that the term covers both social organisations (such as trade unions, political parties and the like) and normalised patterns of social interaction (such as regular employment).

and those in high positions. In his earlier work, Lewis (1961) notes that the cynicism of the Latin American populations he studied extends to the Catholic Church. They tend to be critical of priests and rarely go to confession. Instead, they prefer pilgrimages to popular shrines, or prayer at home. Without doctors and suspicious of hospitals, they tend to rely on herbs, home remedies, curers and midwives. In general, he concludes, such communities have a high potential for protest and are open to political movements that challenge the existing order.⁽¹⁾

Experiencing high levels of unemployment and under-employment, members of the culture of poverty are unable to participate fully in the economic system. Even when they do find employment, it tends to be in a "miscellany of unskilled occupations". Overall, they produce and receive little wealth, and are characterised by low income, lack of ready cash, absence of food reserves in the home, and lack of property ownership. In an effort to cope with these conditions, they tend to pawn personal goods, borrow money at high rates of interest from local money lenders, develop informal credit arrangements with neighbours, use second-hand clothing and furniture, and adopt a pattern of buying only small quantities of food as required.

Although aware of middle-class values and sometimes claiming adherence to them, members of the culture of poverty generally do not live by such values. They may state, for example, that formal marriages are to be preferred, but many will opt for consensual unions. Lewis (1966) notes that such unions have greater advantages for both parties than do formal marriages. For the man, who is likely to be

(1) Perhaps along the lines proposed by Paulo Freire (1972).

present-time oriented with only an irregular income and no wealth or property, avoidance of the expense and entanglements of legal commitments has obvious advantages and represents an adaptive response to his situation. It enables him to experience a high degree of mobility and freedom. For the woman, the advantage of consensual unions is manifest both in her lesser dependency on men who tend to be unreliable and prone to violence, and in her greater claim on their children, the house, or any other property they may own.

4.2.2 Nature of the Poor Community:

The characteristic, in addition to lack of wealth, that highlights the marginal and anomalous nature of the community belonging to the culture of poverty, in an affluent, highly organised and specialised society, is its lack of internal organisation beyond the nuclear and extended family. Some temporary groupings and voluntary associations may occur and a sense of community identity or 'esprit de corps' may be evident, but the strength of this community feeling varies regionally according to such factors as the degree of isolation experienced by the community, its stability over time, its ethnic make-up or the incidence of home or land ownership. At one extreme this sense of community may approach that of a village community, while at the other it is more a sense of territoriality that sets the poor community apart from other groups. Poor housing conditions, overcrowding and gregariousness may accompany the minimal organisation of such communities. In his earlier work, Lewis (1961) notes that these communities tend to have a high proportion of individuals in the younger age groups, and that their life expectancy is lower than

national averages. There also tends to be a high incidence of alcoholism and frequent resort to physical violence when settling quarrels or training children. Wife-beating is thus likely to occur more often than for the society as a whole. In addition, according to Lewis, a high incidence of working women and child labour may at times lead to a higher proportion of family members being gainfully employed than is the case for society in general.⁽¹⁾

4.2.3 The Family:

The main unit of the culture of poverty is the family. Often founded on consensual unions, it tends to be matrifocal with a high incidence of abandonment by men. The children consequently tend to have greater knowledge of maternal than paternal relatives. The mothers tend to be authoritarian and to dominate family life, and although there is a verbal emphasis on family solidarity, competition between siblings for maternal affection and limited resources makes its practical fulfilment difficult to achieve. There is little privacy and initiation into sex comes early. Childhood is not valued as an especially protected phase in the lifecycle.

4.2.4 The Individual:

Lewis describes the individual in the culture of poverty as having a sense of marginality, dependence, inferiority and helplessness which is often accentuated, in the case of minority ethnic groups, by racial discrimination. Faced with difficult life circumstances, they tend to develop a low level of aspiration and a sense of fatalism and resignation. These characteristics may vary, however, according to different national contexts. The national ethos of upward

(1) The apparent contradiction between this statement and Lewis' description of members of the culture of poverty as experiencing high levels of unemployment is discussed more fully later in the Chapter.

mobility, characteristic of Australia and the United States, for example, may engender higher aspirations than are likely to occur in, say, Mexican society, which tends to be more static and hierarchical. Along with feelings of alienation from the dominant society, members of the culture of poverty tend to develop poor self-esteem and feelings of personal unworthiness. Maternal deprivation tends to lead to weak ego structure, orality and confusion of sexual identity. Perhaps as a reaction to this, among the men there tends to be an emphasis on male superiority and masculinity, while, in Mexico, women in the culture of poverty tend to develop a 'martyr complex'.

Characterised by a strong sense of present-time orientation, members of the culture of poverty, according to Lewis, have little disposition to defer gratification or plan for the future and consequently have weak impulse control. They also tend to have a high tolerance for psychological pathologies. With little sense of history and only a local orientation, they have little awareness of, or ideological identification with, groups sharing similar circumstances beyond their immediate community. Although acutely aware of status distinctions, they tend not to be class-conscious in the traditional sense.

Many of their characteristics have positive dimensions which are frequently not recognised by the middle class. The strong present-time orientation and legitimization of hedonism, typical of members of the subculture, for example, enhance their capacity for spontaneity, for adventure, for enjoyment of the sensual and for indulgence of impulse. Similarly their low level of aspiration reduces frustration as they tend to be less driven and anxious than the middle class. In addition, by providing an outlet for hostility, their

frequent expressions of violence may lead to less repression than is the case for the middle class. Nevertheless, Lewis reminds us, there is still much "pathos, suffering and emptiness" (1966, p.25), for the culture of poverty provides little support or long-range satisfaction, and the mistrust it engenders magnifies the isolation and helplessness its members feel.

Viewed from these four perspectives, Lewis' concept clearly encompasses a wide range of social, economic and psychological characteristics. To some critics this very diversity acts as a source of theoretical, empirical and conceptual limitations to his model. These and other criticisms are examined in the discussion that follows.

4.3 CURRENT STATUS OF THE CONCEPT OF A CULTURE OF POVERTY

As noted previously, Lewis' concept became enmeshed in political debates concerning the nature of government policies towards the poor, particularly in the United States. As these debates became more acrimonious and polarised, the concept became the subject of increasingly vehement and, at times, unfair criticisms. To its more extreme critics, the concept was "chillingly like the idea of race" (H. Lewis,⁽¹⁾ 1971, p.347) and provided a rationale for those who sought to preserve the status quo and keep poor people in their state of economic, social and political deprivation. Along with other, less strident, opponents of the concept (such as Valentine, 1971 and Leacock, 1971), they were critical of what they claimed was its description of the poor only in negative terms, and its assertion that

(1) The first initial of Hylan Lewis, a critic of Oscar Lewis' concept, is included where appropriate, so as to avoid confusion between the two authors.

these negative characteristics were both self-perpetuating and the cause of poverty. They argued that it provided a distorted characterisation of the poor by ignoring their strengths and interpreting their non-middle-class traits as pathological symptoms. Typifying this view, Hannan (1973) argued that, according to culture of poverty theorists, the "poor are essentially defective - the subculture is defective, the family structure is defective, they themselves are defective. The poor are responsible for their own poverty and must be rehabilitated" (Hannan, 1973, p.120). Consequently, according to its critics, the concept focuses attention on changing the poor, rather than on changing the state of poverty or the institutions that may give rise to it. Hence, in their view, proponents of the concept, either deliberately or unwittingly, contribute to policies that keep poor people poor.

But such criticisms exaggerate Lewis' position and reflect the "mixture of reason, politics and emotion that marks much of our discussion of the poor" (H. Lewis, 1971, p.351). It is probably true, as Gans (1970) points out, that when attempting to define cultural elements that contribute to poverty, it is as important to include an examination of "the persistent cultural patterns among the affluent that combine to keep their fellow citizens poor" (p.156) as it is to look at the cultural characteristics of the poor. For, as he notes, an over-emphasis on the latter may place "the onus of poverty too much on the poor" when poverty may be the product of "an economic system that is dedicated to the maintenance and increase of wealth among the already affluent" (p.156). But Lewis does not deny the crucial influence the broader society has on the continuation of poverty. Rather, he argues that such influences are of primary importance. He

contends, however, that they are not the only influences, and that learned cultural patterns of the poor also play a role. With regard to the relative importance of "the internal self-perpetuating factors in the subculture of poverty as compared to the external societal factors", he writes, "in the long run, the self-perpetuating factors are relatively minor and unimportant as compared to the basic structures of the larger society" (Lewis, 1969, p.192).

Nor does Lewis emphasise only negative characteristics of the poor, for he describes the vitality, spontaneity and joy that accompanies the deprivation and suffering of members of the culture of poverty. Characteristics of the subculture, such as families based on consensual unions with a high incidence of abandonment by men, or the tendency of individuals to seek immediate, rather than deferred gratification which he identifies, represent his observations, not his value judgements. Negative connotations attributed by critics to such traits reflect their own value judgements (often from a middle-class perspective), not those of Lewis. On the contrary, Lewis describes these characteristics not as inadequacies, but as positive adaptive qualities. Nevertheless, there is a need to be aware of the dangers inherent in labelling groups as belonging to the culture of poverty. For, as Hylan Lewis points out, such labels may then constitute a 'social reality' that adversely affects the self-esteem of members of the group, or leads to inaction on the part of the legislators who may use it to rationalise that poverty is both inevitable and ineradicable.

Perhaps the most comprehensive and detailed series of critiques of Lewis' concept appears in a book edited by Leacock (1971). It incorporates papers given at a symposium called specifically to

analyse critically the idea of a culture of poverty. A paper by Leeds (1971) is particularly scathing and wide-ranging in its criticisms, and covers most of the important issues surrounding the concept. In it, Leeds challenges Lewis' use of the term 'culture'; argues that his own and other evidence does not support claims for the existence of an identifiable group belonging to the culture of poverty; and accuses Lewis of failing his "ethical-civic" responsibilities. While it is not possible in this present treatise to examine in detail each point raised by Leeds, it is important to look at some of the broader issues that he identifies.

One criticism that he shares with other authors (e.g. Hannan, 1973) concerns Lewis' use of the term 'culture' to describe his model. The points he raises in this regard are essentially of a theoretical and terminological nature, and are a matter for anthropology, sociology and like disciplines to resolve. A detailed analysis of these issues, therefore, is beyond the scope of this discussion, which is concerned primarily with the utility of Lewis' concept for providing a framework that describes adequately the social background of Aborigines in Australia, and not with Lewis' theoretical or terminological purity. Nevertheless, in view of the importance of these issues for a more complete understanding of the nature of Lewis' concept, they must be considered briefly.

Leeds argues that the culture of poverty as described by Lewis does not conform to traditional definitions of culture. He is critical of the universality attributed to it, and argues that, as it is not restricted to a population delimited by "sociogeographic isolation", "political boundaries" or a uniquely patterned network of "meanings", "behaviours", or "social bodies and relationships" (1971, p.229), it cannot be a culture in the traditional anthropological sense.

Lewis counters such criticisms by claiming that different profiles of the culture of poverty may emerge in different national contexts, but maintains that each shares similar patterns of interrelated traits.

Leeds also argues that the culture of poverty does not have a social system to 'carry' it as, by his reckoning, a culture, in the traditional sense, should. However, he tends to pay insufficient attention to the restricted range of social contexts in which the culture of poverty is likely to emerge. Lewis points out that it is a subculture of the 'Western social order' and that it is likely to occur during the early stages of capitalism. It constitutes a subculture, he argues, because its members as a group display identifiable differences from other groups in these societies that arise primarily from the poverty and non-participation of its members in the major institutions of the larger society. In this sense, he is in agreement with Levi-Strauss' (1963) definition of culture as representing 'significant discontinuities' between groups and with Yinger's (1960) description of subcultures as representing "normative systems of groups [which] ... differ in such things as language, values, religion, diet and style of life from the larger society of which they are part" (p.801). Unlike the role norms of the broader society, subcultural norms are those that "set a group apart from, not those that integrate a group with, the total society" (p.802). Nevertheless, Leeds' observation that Lewis pays insufficient attention to the identification of institutions, such as informal networks of friends, work companions or neighbours, that go beyond the family but which also 'carry' the culture of poverty, is an area requiring further clarification, as is the nature of the relationship between such groups and the dominant society.

Leeds also accuses Lewis of conceptual unclarities in his description of the culture of poverty. He argues that Lewis' model incorporates contradictory conceptions of culture. The first

conception, he claims, is that the culture of poverty consists of an array of autonomous cultural elements. The second, he argues, is that the culture of poverty forms an integrated system passed on from one generation to the next, in the form of a single whole. He asserts that both conceptions are incompatible and reflect the failure of American anthropology "to resolve the contradiction between the asserted distributability of cultural elements and their integration into a system" (1971, p.229). However, this contradiction appears to be an artefact of the artificial and inflexible constraints on conceptions of culture imposed by Leeds' division of these conceptions into polar opposites. His implication on the one hand that culture may be conceived as comprising a holistic integrated system that is unchanging and unchangeable, tends towards a dogmatism that leaves insufficient room for the dynamics of culture change or for variations of a cultural theme. Similarly, both his assertion on the other hand that alternative conceptions of culture revolve exclusively around the idea that culture is comprised of an array of autonomous elements, and his implication that there is no midpoint between the two polarised visions of culture that he identifies, tend to be overly rigid.

Perhaps the most authoritative and widely cited definition of culture is that made by Tylor (1871): "Culture is that complex whole that includes knowledge, belief, art, morals, law, customs and any other capability of habits acquired by man as a member of society".⁽¹⁾ There is no suggestion in this definition that this 'complex whole' is an inflexible system passed on unchanged from generation to generation, nor that it consists only of discrete, unrelated elements. The components of the system - knowledge, belief, custom and so on - are likely to be interrelated and to be susceptible to change, thereby

(1) Quoted in Chinoy (1968, p.80).

giving culture a dynamic quality which enables it to vary both geographically and temporally. Lewis similarly does not describe the elements of the culture of poverty as being totally independent of each other, as alleged by Leeds, nor does he assert that they are part of an unchanging, rigid system. Rather, he suggests that the social, economic and psychological traits that comprise the culture of poverty are functionally interrelated and fall into clusters. It is the patterning of these traits in a given population that defines the subculture of poverty and which tends to be transmitted across generations.

Leeds also accuses Lewis of conceptual imprecisions in relation to his distinction between the poor and members of the culture of poverty. Referring to his own difficulty in finding an identifiable population that fitted Lewis' description of the culture of poverty, he argues that the traits described by Lewis were typical only of isolated families. Arguing along similar lines, Hannan (1973) claims that the culture of poverty concept was untestable, since individuals and families that were poor but did not have the attributes described by Lewis were, by definition, not considered to be members of the culture of poverty. Indeed, there is a danger of circularity in arguing along lines which may lead to the non-acceptance of contrary evidence. But Lewis (1966) does not claim there is a sharp division between the poor who belong to the culture of poverty and those who do not. Rather, he views the traits of the culture of poverty as end points along continua. Those groups that have a higher incidence of these traits tend to be more immersed in the culture of poverty than are other groups. The transition between those who display many of the characteristics of the culture of poverty and those who display few is gradual rather than abrupt.

Some criticisms by Leeds of Lewis' model appear to be over-reactions based on emotive and political rather than purely rational considerations. He claims, for example, that the term 'culture of poverty' is provocative, and implies that it has made fieldwork more difficult for later research workers. He also is critical of the "very widespread novelistic publication of uninterpreted material" and of what he claims is Lewis' exposure of his "poorly thought-out concept to popular and professional misuse" (1971, p.281). It is beyond the scope of this discussion to examine such criticisms in detail, other than to comment that, if the elimination of poverty remains an important objective in modern societies, then all potential obstacles to the attainment of this ideal need to be aired and examined thoroughly, even at the risk of having some writers' ideas and motives misinterpreted.

Other criticisms by Leeds and others (especially Valentine, 1971) of Lewis' methods and data do suggest shortcomings in Lewis' work, and elements of his concept that require further clarification. Leeds points to the great diversity within and between slum communities studied by Lewis, himself and others; and claims that many have more organisation than is acknowledged by Lewis. His reference to this variety serves as a useful reminder of the heterogeneity of most cultural groups and a warning of the dangers of stereotyping both groups and individuals by over-generalising. But such shortcomings do not negate Lewis' concept, nor his conclusion, based on his fieldwork, that some groups do share many of the characteristics he describes. Both Valentine (1971) and Leacock (1971) suggest that Lewis' conclusions are based on unrepresentative behaviour of those he studied, exhibited during the unfamiliar circumstances of the

data-collecting process. But the rapport built up between Lewis and his informants, the intimacy of his methods, and his use of research assistants that were ethnically and socioeconomically similar to his informants are likely to have contributed significantly to overcoming this problem.

Nevertheless, Lewis' work does suffer from some important empirical limitations. While enabling an in-depth and insightful account of individual members of the culture of poverty, his methods, as Valentine (1971) notes, may have led to inadequate sampling of the population he studied. Valentine also points out that Lewis failed to describe in detail his questionnaire format, thereby making comparative studies more difficult. This limitation will be discussed in more detail in Chapter 5. Other limitations of Lewis' work noted by Valentine include Lewis' failure to check the data he presents against the model he proposes. He leaves his readers to infer similarities; but as Valentine points out, the data he describes and his model do not always match.

Leeds (1971) also criticises the way in which Lewis has ordered the characteristics of the culture of poverty. He writes: "The entire ordering of the traits lacks conceptualization and logical ordering. In short, it makes no theoretical sense" (p.242). However, he comes close to contradicting himself by arguing on the one hand that the traits are not logically related and, on the other, that some are so similar that they are virtually synonymous. Nevertheless, Lewis probably could have integrated the traits he describes more effectively as the ordering he presents is marked by overlapping categories that reflect his lack of a single unifying perspective guiding their organisation and which make their quantification difficult (see Chapter 5). In addition, some traits do appear contradictory and

others are vague. For example, he argues on the one hand that there is a strong emphasis on machismo, and on the other that members of the sub-culture of poverty experience confusion over their sexual identity. Similarly, while claiming on the one hand that unemployment is rife, he argues on the other, that, as a consequence of female and child labour, a high proportion are gainfully employed. Imprecise descriptions, such as "constant struggle for survival", or non-distinctive characteristics, such as "predominance of the nuclear family" tended to be deleted from his later works. Some of these changes may have occurred in response to criticisms such as those directed by Leeds, but the kind of dissection of individual traits engaged in by Leeds suffers by focusing overmuch on the 'letter' rather than the 'spirit' of Lewis' model. It ignores Lewis' suggestion that his model is tentative and subject to change, and obscures Lewis' view of the culture of poverty as constituting a statistical profile of a population which is likely to have a higher incidence of such interconnected traits and clusters of traits than have other groups.

Leeds' (1971) major criticism of Lewis' model, however, concerns his claim that the traits described by Lewis can best be understood as individual and family responses to stress and externally imposed constraints against resolving the stress. Along with other opponents of the concept (Valentine, 1971; Leacock, 1971; Hannan, 1973), he adopts a situational perspective, according to which people adapt to whatever situation they are in, and hence change their response if the situation changes. Thus, attitudes, values and habits that typify poor people are described as pragmatic adjustments to conditions of material deprivation and severely limited lifestyle options. They are "functional adaptations to low incomes which are enjoined by the nature of the labour market and the larger economic institutional

structure" (Leeds, 1971, p.253). Improved employment opportunities and guaranteed income are sufficient, therefore, they argue, to eliminate poverty and its effects. However, as Gans (1970) points out, this view is overly simplistic and ignores anthropological, psychological and sociological evidence which suggests "that persistent culture and personality elements may prevent the poor from adapting to economic opportunities when these are available" (p.150).

Nevertheless, one of the most widespread criticisms of Lewis' model is his emphasis on early socialisation as an important factor in the persistence of the culture of poverty (Valentine, 1971). Critics claim that it takes insufficient account of both human adaptive potential at later ages, and the dynamics of culture change. Leacock (1971) argues, for example, that "to say or imply that values and motivations are set by six or seven flies in the face of findings in developmental psychology" (p.13). While this appears to be an overstatement that ignores much theory and research which highlights the importance of the early formative years in shaping cognitive, personality and other psychological characteristics, it does point to an inconsistency in Lewis' work. On the one hand, Lewis asserts that, once a child has been socialised into the culture of poverty, his adaptive potential is limited, thereby implying that the culture of poverty can change only little from generation to generation. On the other, he stresses the dynamic nature and adaptive quality of the culture of poverty which 'waxes and wanes' according to national contexts and prevailing ideologies. However, such criticisms are of emphasis rather than essence, and do not invalidate Lewis' model. He does not deny that the culture of poverty may vary with time, and insists only that its essential features are passed on from one generation to the next. It is his identification and

unification of these features that gives his model its theoretical and empirical value in providing both insights into the nature and persistence of cultural traits exhibited by many disadvantaged groups, and a framework for constructing inquiries into the characteristics of these groups.

Even so, cautionary remarks by Gans (1970) should be taken into account when evaluating the nature of such traits and their persistence. He argues that:

What parents teach children ... is a mixture of old and new, and both children and adults pick up yet other behavioral norms and aspirations from the constant stream of new circumstances to which they must adapt but for which tradition has no solutions, at least in modern society ... The total stock of behavioral norms and aspirations which people hold is thus a mixture of situational responses and learned patterns. Some parts of this stock are strictly ad hoc responses to a current situation and will disappear if it changes or disappears. Other parts of the stock are internalized and become an intrinsic part of the person and of the groups in which he moves, and are thus less subject to change with changes in situation. Even so, the intensity of the internalization varies: at one extreme, there are values which are not much deeper than lip service; at the other there are behavioral norms which are built into the basic personality structure, and a generation or more of living in a new situation may not dislodge them. They become culture and people may adhere to them even if they are no longer appropriate, paying all kinds of economic and emotional costs to maintain them (pp.153-154).

Indeed, a major contribution of Lewis' concept is its recognition of the complexity of social and psychological interactions that shape the lifestyles of the groups he describes. It highlights the naïveté of attempts to explain these behaviour patterns in terms of institutionalised pressures of the broader society alone. And although its emphasis on self-perpetuating psychological and socialisation patterns may produce slight distortions in the other direction,

this appears not to be Lewis' intention. To caricature his view as explaining poverty in terms of personal inadequacies of the poor alone, therefore, is to misrepresent his intention, and to ignore his emphasis on the dynamic and adaptive nature of the lifestyle he describes and his recognition of the paramount role of external social forces in shaping the culture of poverty.

But how applicable to Aborigines are the traits characterising members of the culture of poverty as defined by Lewis? As noted previously, he argues that although groups in similar social circumstances develop like characteristics, these will tend to vary according to different national contexts. Given the Australian context, then, how closely do the psychosocial characteristics of Aborigines approximate those which Lewis describes in his model?

4.4 THE CULTURE OF POVERTY AND ABORIGINES

An assumption underlying the application of Lewis' concept to a description of the social background of Aborigines, is that they share a range of sociocultural traits which is distinct from those of most other sections of the Australian population. As reported in Chapter 1, this distinctiveness is well documented. Comprising the genetic successors (diluted in many instances) of the original inhabitants of Australia, they have been the losers in the contest with Europeans for control over most of Australia's resources. Recent Land Rights legislation may impede this process in the future, but at present they have benefited least from the development of a modern capitalist economy in Australia. Along with Torres Strait Islanders, they "in every conceivable way ... stand in stark contrast to the general Australian society ... They probably have the highest growth rate, the highest birth rate, the highest death rate, the worst

health and housing and the lowest educational attainment, occupational, economic, social and legal status of any identifiable section of the Australian population" (National Population Inquiry, 1975, p.455).

Such summary statements tend, however, to mask the diversity of this group of Australians. As pointed out in Chapter 1, some live semi-traditional lifestyles on reserves in northern and central Australia, while others have lifestyles in urban areas that are virtually indistinguishable from those of their Euro-Australian contemporaries. Many others occupy a position somewhere between these two extremes and may be found on missions, pastoral stations, the outskirts of country towns, in 'urban ghettos', or interspersed among the White population in both cities and towns. In view of this diversity, therefore, it is important to identify which Aboriginal groups are likely to be members of a culture of poverty.

The distinction between predominantly full-blood groups living in the northern, central and north-western parts of Australia, and mostly mixed-blood groups inhabiting areas of close European settlements in south-eastern and south-western parts of the continent, is important in this regard. The impact of European settlement has been less devastating for those in most areas of the centre, north and north west. Fewer Europeans settled there and contact occurred more slowly. The Aborigines thus had more time to adapt. Consequently many traditional beliefs and practices have been maintained, along with a degree of traditional social organisation. These groups, therefore, are less likely to conform to Lewis' conception of a culture of poverty than are their southern counterparts who adhere less to the lifestyle patterns of their Aboriginal ancestors. The focus of this discussion, therefore, is restricted primarily to

mixed-blood Aboriginal groups living in or near country towns and cities in the more densely settled regions of Australia, and to isolated towns such as Alice Springs, which may reveal similar patterns.

In his important historical series on the effects of government policies on the lives of these Australians, Rowley (1970a) notes that "only now the question is beginning to be asked... Is not the conduct of Aboriginal groups basically common to all groups under stress?" (p.5).

In a second volume (1970b), he attempts an answer by arguing that:

The part Aborigine is reacting very much as depressed racial minorities in other industrial communities have done. The suspicious hostility, discharge of personal tensions in alcoholism and personal violence, the reaction of aggression, of withdrawal into apathy, and even of occasional excessive co-operation with authority (crawling to the boss) suggest not Aboriginal differences but the fact of their common humanity (p.182).

Clearly, both the nature and the universal quality of these characteristics echo Lewis' description of the culture of poverty.

But as Nurcombe (1976) notes, and Rowley (1970a, 1970b) documents, this universality is modified somewhat by the unique historical circumstances of Aborigines. Unlike the situation Lewis describes, for example, a strong demand for unskilled labour has, until recently characterised much of the development of the modern Australian economy. Similarly, private and government agencies have played a greater role in attempting to overcome disadvantages experienced by Aborigines than Lewis' model would suggest, particularly over the last decade. But other conditions generally conform to the pattern described by Lewis and the above-mentioned differences appear

not to have inhibited the emergence of an Aboriginal version of the culture of poverty, as will become evident from the ensuing literature survey.

This survey is presented in accordance with the four perspectives used by Lewis to describe his model. The relationship between Aborigines and the larger Australian society is reviewed first, followed by a consideration of evidence relating both to Aboriginal communities in general, and their families in particular. Studies of Aboriginal personality characteristics are then examined, followed by a discussion of rapid changes that have been occurring in recent years. Sources consulted include a selection of important historical, sociological and psychological inquiries, but an exhaustive review of literature in each of these fields is beyond the scope of this survey. Its purpose is not to provide a comprehensive account of the social history or contemporary social situation of Aborigines, but to investigate trends as they relate to Lewis' concept of a culture of poverty, in recognition of the thesis that an adequate appreciation of the cognitive functioning and schooling of Aboriginal children must include considerations beyond merely psychological and educational areas.

4.4.1 Aborigines and Australian Society:

Typical of the populations described by Lewis, Aborigines in areas of close European settlement have been victims of western colonialist processes and the imposition of a capitalist economic system. The magnitude and abruptness of the changes wrought by this imposition, along with its accompanying brutality, negligence and disease, amply evidenced in historical literature (Docker, 1964;

Rowley, 1970a, 1970b; Franklin, 1976), has made successful adaptation by Aborigines an extremely painful and difficult process that has continued to the present. As noted in Chapter 1, many did not survive and the mixed-blood descendants of those who did, to varying degrees have remained marginal to the new order and alienated from it.

Throughout the last century and the early parts of this century, much of the demand for labour in Australia came from rural industries. Most Aborigines lived in rural areas and some fitted relatively easily into occupational niches that became available for them. But much of the demand for labour was only of a temporary nature and this suited many Aborigines, for whom full-time membership of the labour force probably held few attractions. Demoralised at having lost their tribal lands, culture and independence; imbued neither with the work ethic nor the desire to labour continuously for those who occupied their land or for possible gain in the distant future; and not sharing the European zest for the accumulation of material acquisitions; they generally did not conform to the employer's view of a model labour force (Rowley, 1970b). Indeed, like the English peasantry who were recruited for factories at the dawn of the industrial revolution, they were regarded by employers as being unreliable drunkards (Castle and Hagan, 1979). Throughout this period, however, many Aborigines began to share a similar ethos to the White rural working class with whom they had most contact (Beckett, 1965).⁽¹⁾

(1) For an elaboration of the nature of the historical experience of New South Wales South Coast Aborigines, see Chapter 6.

Throughout the twentieth century, increasing industrialisation in the cities and mechanisation in rural areas have shifted the demand for labour to urban centres. Until recently, however, few Aborigines lived in these areas and most were thus unable to benefit from the employment opportunities that became available. Like members of the culture of poverty elsewhere, therefore, they continue to participate minimally in mainstream economic life and to experience material poverty. Most remain unskilled, are not members of trade unions, and experience high rates of unemployment (Felton, 1966; Calley, 1956; Lippmann, 1973). They have little to do with financial institutions such as banks, building societies or the stock market and rarely develop autonomous commercial enterprises (Hill, 1975; Smith and Biddle, 1965; Brown et al., 1974). Their custom is frequently important, however, for such groups as taxi drivers, hoteliers and smallgoods shop proprietors (Felton, 1966).

Except when compelled through coercion or necessity, they also are little involved in numerous other areas of the institutional life of mainstream Australian society. Their minimal participation in the education system has been documented in Chapter 1. Few participate in voluntary associations or institutionalised political processes. Hence, they tend not to belong to political parties, rarely assume positions of political office and frequently do not vote in Federal, State or local elections (Smith and Biddle, 1965; Rowley, 1970b). At the community level, few belong to civic organisations or the same sporting and social groupings as White Australians. As will be discussed later in this Chapter, their kinship and value systems and associated behaviour patterns also differ from those of most White Australians.

Some institutions that play an important role in the lives of Lewis' South American samples are less prominent in Australian society and therefore are not so important to Aborigines. The army is one example and the Catholic Church is another. Many Aborigines are attracted to Pentecostalist movements, however, and sometimes have formed their own Church organisations (Calley, 1964). As was the case with Lewis' subjects, belief in sorcery also is evident among some groups. In addition, many use herbs and traditional medicine more extensively than do Whites.

In contrast to the usual trend for members of a culture of poverty, however, Aborigines have substantial interaction with agencies dealing with deprivation and deviance. In Australia a welfare system that is advanced relative to those in most Latin American nations has ameliorated to some extent the need for Aborigines to rely on their own financial management and resources. Until recently, however, as evidenced by the findings of the Commission of Inquiry into Poverty, referred to at the beginning of this Chapter, it has done little to overcome the poverty and dependence which many experience. Aborigines also tend to be greatly over-represented in prisons, juvenile detention centres, orphanages, centres for alcoholics and the homeless, and psychiatric hospitals. Alienation, mistrust of government officials, and dislike for the police are other consequences. Nurcombe (1976) suggests that a resulting reservoir of discontent may be waiting to be tapped by 'black power' movements.

The demoralisation experienced by many is accentuated, Rowley (1970b) suggests, by the realisation that their acceptance in mainstream Australian society is usually contingent upon their adoption of White attitudes and outlook. It requires that they accept an ideology which implicitly requires substantial rejection or devaluation by them

of their Aboriginal origins. For many, such a course involves a life-long and often lonely struggle against overt discrimination, unthinking insults and constant deprecation of the Aboriginal way of life. Often, too, it may mean rejection by other Aborigines who choose not to adopt White Australian lifestyles.

4.4.2 Aboriginal Communities:

For many, the price is too high and the demands too great. They adopt, instead, an alternative, less stressful lifestyle shared by their equally alienated friends and relatives. It involves limited aspirations in terms of the dominant middle-class value system but protects them from continuous exposure to personal devaluation. Like the groups characterised by Lewis, these communities have attempted to integrate disparate cultural elements from various sources into a workable way of life. Remnants of traditional beliefs and attitudes persist and, as noted previously, some characteristics of the White rural working class have been adopted; but for the most part they show similarities with marginal groups elsewhere in the world.

These groups tend in particular to live on the fringes of country towns and on reserves and it is among them that characteristics typical of a culture of poverty are likely to be found. Many communities, for example, have a sense of cohesion and common identity (Lippmann, 1973; Bell, 1965). But this may vary according to the duration and stability of their occupation of a particular area. Beckett (1965) reports that relations between some groups have continued to be influenced by memories of tribal rivalries until recent times. A strong attachment of individuals to the district of their birth also has frequently been reported, even though these individuals may range over wide areas seeking work and visiting relatives (Bell, 1965).

Despite the sense of common identity thought to characterise such groups, however, they tend to have minimal social organisation (Lippmann, 1973). A proliferation of Aboriginal organisations has appeared over the past decade, but frequently they are of short duration and often have been dominated by individual families (as evidenced in Chapter 6). When contrasted with the complexity of modern Australian society, however, such groupings, even when they do endure, still represent only a low level of social organisation. Nevertheless, the trend towards increasing organisation is important and will be referred to again later in this Chapter.

In addition, like Lewis' populations, these communities tend to be young, with a lower life expectancy than national averages. In 1979 it was 50 years for Aboriginal men, in contrast to 68 years for Australian males generally (National Population Inquiry, 1978). Alcoholism and violence are common and housing tends to be poor and overcrowded. These groups also tend to have fewer possessions than the general population and rarely own property.

Many of these characteristics are not restricted to reserve or fringe dwellers, however, but are shared to varying degrees with other Aboriginal groups. In many rural towns, for example, an 'upper class' that adheres more closely to European lifestyles and attitudes has been identified (Reay, 1949; Reay and Sitlington, 1948). Compared to the reserve and fringe dwellers, this group is better housed, experiences more regular employment, has more possessions and seeks more involvement with White Australian society and, as noted in Chapter 2, scores higher on cognitive tests. But they still have a higher

incidence of traits in common with Lewis' model than does the Australian population in general.

Urban Aborigines tend to be similar. Like their 'upper class' rural counterparts, and unlike the 'barrio' communities described by Lewis or the reserve dwellers already referred to, they do not live in areas that are physically isolated from other groups. But they do tend to congregate in the poorer suburbs. Many have immigrated from rural areas and in Sydney gravitate towards localities where others from their region live (Beasley, 1970; Bell, 1965). Their housing is usually rented, often overcrowded and frequently dilapidated, but generally is superior to that available on reserves. Employment opportunities are greater than in rural areas and welfare agencies, both government and private, are more numerous. There also tend to be more Aboriginal organisations. But considerable internal variation exists within these communities with some families displaying many characteristics in common with Lewis' model and others very few.

4.4.3 Aboriginal Families:

Among reserve and fringe dwellers, families conform more often with Lewis' model. Many are founded on unstable consensual unions and tend to become matrifocal. Frequently they are headed by a maternal grandmother. The extended nature of many such families is often described in positive terms as reflecting kinship obligations which require mutual sharing of available resources. They are thought

to provide physical and emotional support for those in need and hence to act as a buffer against the exigencies of life in an uncertain, deprived and often hostile environment (Rowley, 1970b).

Children tend to be reared with a laissez-faire attitude, but opinions differ as to whether this is accompanied by indulgence or negligence. As pointed out in Chapter 1, many children are malnourished and in a poor state of health. Violence in child training may be less than suggested by Lewis, but alcoholism and interpersonal violence between adults is common. Child labour also may be less, as schooling in Australia is compulsory until the age of fifteen; but, again as noted in Chapter 1, absenteeism from school is common among Aboriginal children; and frequently, entire families would participate in seasonal work.

Based on his own experience and on a series of interviews, Gilbert (1977), a well-known Aboriginal author, comments that:

The majority of Aborigines are deeply ashamed of what they know is the truth about their people today. So, together with many sympathetic whites, they embrace and propagate a number of myths about themselves: that Aborigines share easily; that they have a strong sense of community; that they don't care about money and lack the materialism of the white society; that they care more deeply about their children than do white parents and so on. Such fallacies are generally believed by both black and white people... But you only have to go to any Aboriginal mission or reserve to see the truth: the lack of community spirit, the neglect and abuse of tiny children and all the rest of it (p.1).

Eckermann's (1973) research similarly suggests that mutual support and a sense of group identity may have been overstressed by many anthropologists.

Urban and 'upper class' rural Aborigines tend to have more stable families and to adopt stricter child-rearing patterns, but as noted earlier, there is considerable diversity. Gale and Binnion (1974) argue that in Adelaide, the variation between Aboriginal households is so great that there is no typical family. Some are nuclear with single incomes and are virtually indistinguishable from their White neighbours. The families tend to be small, stable and to have an adequate income. Often they are headed by a white male. Others are made up of extended families and may include several 'income units'. They tend to be headed by single parents or couples in 'de facto' relationships. But whereas some households include only blood relatives and involve a system of kinship obligations, others consist of loosely-organised groups of unrelated individuals, some of whom may not be Aborigines. Similar diversity has been reported for other urban and rural groups (Smith and Biddle, 1965; Bell, 1965; Hill, 1975; Brown et al., 1974).

In view of this diversity, then, it is clear that not all Aborigines in the more densely settled areas of Australia belong to a culture of poverty. In some households, for example, many individuals bring in an income. But while not all Aborigines are poor, there is a greater tendency for them to be poor than for the general population. Similarly, while there may be no typical family, there is a greater tendency for their families to be matrifocal and extended. In summary, then, there is a greater likelihood that Aborigines, whether living in cities, towns, or on reserves, will exhibit more of the sociocultural traits of the culture of poverty than do the general Australian population.

4.4.4 The Individual:

The psychological characteristics of Aborigines appear in general to follow a similar pattern, but not all research findings are consistent. Evidence from historical and sociological sources, for example, tends to be unanimous in suggesting that Aboriginal males in particular have been affected adversely by European settlement. Their authority and roles were undermined more severely than was the case for women, who still had to rear children. In addition, early colonial Australia was overwhelmingly masculine in its make-up, and hence women were in demand. At times this enabled women to exercise greater influence over men, both Aboriginal and European, than was the case prior to the European arrival. Aboriginal men, on the other hand, were exposed only to low-status males roles. Their high rates of deviance, dependence on welfare, and alcoholism strongly suggest that they experienced a sense of alienation, helplessness, hopelessness, and poor self-esteem.

But psychological studies reveal a more complex picture. They indicate that an individual's sense of identity may play a key role in influencing the nature of his personality characteristics. Those who identify primarily as Australian rather than as Aboriginal tend both to favour assimilation over integration (Sommerlad and Berry, 1970), and to be more 'acculturated' (Kearney and Fitzpatrick, 1976), or 'Westernised' (Berry, 1970). They also tend to be physically more like other Australians (Berry, 1970). Dawson (1969) provides evidence indicating that more acculturated groups also experience less unresolved attitudinal conflict than do groups that are more exposed to traditional influences.

Individuals identifying more as Aboriginal than as Australian, on the other hand, tend to oppose assimilation and favour either integration or rejection of White Australian society (Berry, 1970; Sommerlad and Berry, 1970). They tend to experience a high level of psychological marginality and psychosomatic stress, and have a tendency towards deviance (Berry, 1970). Berry also notes that, like marginal groups elsewhere, the Aborigines he studied had a strong sense of alienation. Kearney and Fitzpatrick (1976) similarly found that less acculturated Aboriginal groups experience a greater sense of powerlessness and perceived prejudice than more acculturated Aborigines, but have a stronger sense of group cohesion.

One personality characteristic that has particular relevance for the possible outcome of recent governmental policies encouraging Aboriginal self-determination is their locus-of-control orientation. Derived from Rotter's (1966) social learning theory, this concept differentiates between individuals who feel in control of their destiny and those who do not. Thus, an individual with an internal locus-of-control orientation believes he can control external events to suit his own ends, whereas an individual with an external orientation believes himself to be at the mercy of fate or other forces over which he has little influence.

As noted previously, sociological and historical evidence suggests that Aborigines have developed strong feelings of helplessness, and hence, an external locus-of-control orientation. But the results of psychological studies tend to be ambivalent. Thus, on the one hand, as noted in Chapter 1 (1.6), Wright and Parker (1978) found that an internal locus-of-control orientation not only was related to higher levels of school performance for Aboriginal children but also that it

was a better predictor of the school performance of these children than was a test of their intellectual abilities. On the other hand, however, they found no difference in locus-of-control orientation between Aboriginal and White children in their study.

Similarly, although, as noted above, Kearney and Fitzpatrick (1976) found a trend for less acculturated Aboriginal groups to experience a greater sense of powerlessness than more acculturated groups, they found no difference between both groups with regard to their respective value orientations towards mastery over, or subjection to, nature. This latter finding supports the results of a study by Eckermann (1973) who similarly found no consistent trend for Aborigines living on a government mission station to be orientated towards either harmony with nature, or subjection to it.⁽¹⁾ Watts (1973), on the other hand, found that, contrary to what may be expected, low-achieving high-school Aboriginal girls tended to be more mastery orientated than were high achievers.

Clearly, a great deal more remains to be learnt about the psychological characteristics of varying groups of Aborigines. Nevertheless, the available evidence does indicate that more-highly-acculturated groups, who identify themselves more as Australians than as Aborigines, are likely to have fewer of the traits described by Lewis than less-acculturated groups who identify primarily as Aborigines. This apparent need for Aborigines who seek to escape from poverty and its effects, to give up their Aboriginal identity in favour of an Australian identity, testifies both to the painful and unfair choices

(1) In both these studies, however, the authors caution that the abstract nature of the tasks used to assess value orientations along these dimensions may have invalidated their results.

they face, and to the strong association that still exists between 'Aboriginality' and poverty. It also testifies to the crucial link between a sense of identity and specific sociocultural and psychological characteristics, exhibited by Aborigines. The impact of recent attempts to re-define the prevailing ideology in Australian society by emphasising its multicultural make-up, and of the re-affirmation and new-found pride by many Aborigines in their unique identity and heritage, has yet to be determined fully. But both appear to be complementary positive tendencies that may serve to destroy the 'psychological core' of the Aboriginal culture of poverty by enabling Aborigines to identify positively with a more broadly defined Australian community, in which they are able to retain their sense of distinctiveness, a point that is explored more fully in Chapters 6 and 9.

4.4.5 Recent Trends:

Indeed, as was indicated in Chapter 1 and in the Introduction to this Chapter, substantial and rapid changes have been occurring in many areas over the last decade. Following the Referendum of 1967, Federal governments have assumed increasing control over Aboriginal affairs as the states have tended progressively to relinquish responsibility. The Labor Government (1972-1973) in particular sought to utilise the resources available to it more comprehensively than have previous or subsequent administrations, in an attempt to encourage greater autonomy, cohesion and organisation within and between Aboriginal communities, as well as greater voluntary participation by Aborigines in the mainstream of Australian society. As expenditure increased, there followed an upsurge in the number of agencies and

programmes seeking to bring about improvement of their health, housing, income and employment prospects. Initiatives designed to help them obtain higher status jobs by introducing special training schemes and providing support for obtaining higher educational qualifications were implemented. Exclusively Aboriginal organisations also were funded, enabling greater participation by Aborigines in decision-making processes bearing upon their future (Department of Aboriginal Affairs, 1974, 1976a, 1976b).

As Aboriginal spokesmen and their supporters have been able to press their claims more effectively, laws making specific forms of racial discrimination illegal have been enacted in several states. Land Rights legislation also has been passed, and a new-found unity of purpose and sense of pride in a common heritage and identity appears to have taken root among many Aborigines (Chapter 6). In addition, larger numbers are moving to cities and towns where greater employment opportunities are available. Income disparities between skilled and unskilled labour also have been reduced (Brown et al., 1974).⁽¹⁾

The effects of these changes have yet to be assessed fully. Some indications suggest, however, that they are beginning to bring about improvements in the relative position of Aborigines in Australian society. More Aborigines are gaining higher qualifications; greater numbers are finding continuous employment in well-paid higher-status jobs; many have become better housed and are receiving better health care. But these improvements have been limited and, as evidenced by the findings of the National Population Inquiry (1975) referred to earlier, the sociocultural and economic gaps between Aborigines and other Australians remain large. If Lewis is correct, it may take several generations before these discrepancies can be overcome.

(1) These may have widened again during the late 1970s.

Recent difficulties with the Australian economy, manifested in high unemployment and inflation, in conjunction with cutbacks in Federal government expenditure on Aboriginal welfare noted earlier, also may prolong the present situation. Aboriginal unemployment, for example, has risen sharply to over 37% during the period 1977-1980 (Ryan, 1981).

4.5 CONCLUSION

This Chapter sought to explore the nature of the socio-cultural background of Aboriginal groups from the perspective offered by Oscar Lewis' concept of a culture of poverty. Despite containing some inconsistencies and redundancies, the concept was found to offer a useful framework for such an inquiry, especially if considered as a statistical profile shared to varying degrees by different groups and families. Its psychological dimension has some similarities with the 'marginal man' model adopted by Berry (1970) in his study of Aborigines at Wreck Bay, but differs from it by emphasising the enduring nature of these traits as a consequence of sociological influences in general and resulting socialisation practices in particular. Lewis' model also differs from Dawson's (1969) analyses based on a Traditional-Western continuum, by stressing the paramount role of poverty in shaping many of the attitudes and lifestyles of these groups, rather than simply the need to resolve inconsistencies between competing attitudinal systems resulting from exposure to Western and Traditional cultural influences.

But many questions remain unanswered. For example, how much does the culture of poverty relieve psychological stress, and how much does it promote it? Is involvement in the culture of poverty related to school failure, either directly by promoting such characteristics as high levels of absenteeism, or indirectly by inhibiting the development

of competencies and predispositions that facilitate academic success? What, more precisely, is the nature of the sociocultural forces that underlie the emergence of the culture of poverty? Can the Aboriginal version of the culture of poverty be overcome without an accompanying loss by Aborigines of a distinct identity? How effectively and rapidly can external agencies, if appropriately utilised, overcome internal, self-perpetuating mechanisms of the culture of poverty? What is the likelihood that mainstream agencies will be developed and utilised for this purpose? More generally, what is the nature of the mechanisms governing social change in culture-contact situations, as has existed, and continues to exist, in Australia?

The means by which this inquiry investigates some of these questions are described in Chapter 5, which follows.

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COGNITION, LANGUAGE AND CULTURE:
FOUNDATIONS FOR ABORIGINAL SCHOOLING

VOLUME II

A thesis submitted in fulfilment of the
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PART B

CULTURE, COGNITION AND SCHOLASTIC STATUS:

COASTAL ABORIGINES IN
SOUTHERN NEW SOUTH WALES

FOREWORD TO PART B

Part B of this work is a case study on the practical implementation of an eclectic approach to the investigation of variables that may influence the school performance of Aboriginal children. Hence, complementing the theoretical discussions undertaken in Part A, research findings concerning the culture, psychology and schooling of Aborigines living on the Far South Coast of New South Wales are presented and interpreted in this Section of the inquiry. The methods used in the research, their rationale, and the specific objectives of the research are discussed in Chapter 5.

The research comprises two units. The first, presented in Chapter 6, is an inquiry into the nature and emergence of the socio-cultural characteristics of this group of Aborigines. Its inclusion reflects the view that the interrelationships between a child's school performance, his underlying psychological competencies and predispositions, and his sociocultural background constitute dynamic processes, and that, therefore, it is no longer sufficient to present abilities denuded of the contexts in which they evolved and for which they are functional.

Based on evidence available from a wide variety of primary and secondary sources, it is argued that the historical forces shaping the subculture of these Aborigines can best be understood as manifestations of sociocultural assimilatory and accommodatory processes that reflect complex sociological and psychological interactions which both limit and direct the adaptations made by groups in culture-contact situations. By implication, therefore, the study indicates that there is a need to go beyond purely historical explanations if educators and others are to gain more comprehensive understandings of the complexity

of influences shaping the sociocultural, and hence the psychological, characteristics of contemporary Aborigines in the region.

The second unit consists of a quantitative investigation of the school attendance, scholastic status, classificatory performance, language abilities, locus-of-control orientation, and family backgrounds of Aboriginal and low-socioeconomic White children from the region. The analysis includes an examination both of differences between the two groups on each variable, and of the interrelationships between variables for each group. The results are presented in Chapter 7 and are interpreted in Chapter 8.

Conclusions drawn from both the theoretical and empirical sections of the inquiry and their implications for future policy and research relating to Aboriginal education are presented in Chapter 9.

CHAPTER 5

AIMS, INSTRUMENTS AND PROCEDURES

5.1 INTRODUCTION

Following on from the theoretical discussions and literature reviews of Part A of this work, Part B reports an interdisciplinary study of the culture, cognition and schooling of a group of Aboriginal children. Several considerations emerging from Part A had an important bearing on the nature and direction of this inquiry and on the methods that were adopted. They served as guiding principles in the formulation of the research strategy.

The first of these principles embodies the view that it is somewhat artificial and misleading to present cognitive and language competencies that underlie school performance as though they were autonomous entities existing in a contextual vacuum. Both theory and research findings suggest they are described more accurately as outcomes of complex, ongoing interactions between an individual and his environment. Berry's ecological functionalism and Piaget's developmental theories, for example, both conceptualise psychological abilities and orientations as largely adaptive human responses to environmental stimuli. As pointed out in Chapter 2, this view is supported by research with Aborigines which consistently has demonstrated a close relationship between their test performance on cognitive and language tasks and their sociocultural environment. It can no longer be considered sufficient, therefore, to report findings concerning the language and cognitive competencies of Aboriginal children without also including an adequate account of the milieu in which these competencies evolved and are perpetuated.

A second important consideration emerging from Part A of this work, that needs to be kept in mind when designing and interpreting studies of Aboriginal cognition and schooling, is the extreme heterogeneity of the Aboriginal population. Ranging from tribal full-bloods living a semi-traditional lifestyle in outback areas of Australia, to urban-dwelling mixed-bloods with lifestyles similar to those of most European Australians, they display considerable variety in both their backgrounds and measured competencies. It is important, therefore, that individual communities be studied separately and, in view of the crucial role environment plays in the development of cognitive abilities, that they be studied in some depth. In this way detailed information about a range of communities can be gathered and combined to provide a more comprehensive and reliable picture of the range and diversity of language and cognitive competencies of Aboriginal Australians and of the contexts surrounding their development. In particular, more information on the culture, cognition and schooling of high-contact Aborigines is required, for, as noted in Chapter 1, despite their demonstrated equivalence in performance on cognitive tasks to that of low-socioeconomic Europeans, they continue to show excessively low levels of academic achievement. As their future is likely to be tied to that of the White community, their academic achievement levels place them at a distinct socioeconomic disadvantage.

In response to these considerations and to the need, noted in Chapter 1, for educators and policy-makers to have more comprehensive understandings, both of the sociocultural environment of their Aboriginal students, and of the dynamics of culture change, this inquiry includes an intensive investigation of the nature and emergence of the social background of a group of Aboriginal children who experience

close and continuous contact with White society. Incorporating both quantitative and non-quantitative techniques, and based primarily on Lewis' concept of a culture of poverty, the investigation traces from an historical perspective the emergence of the subculture to which these children belong; seeks to determine the nature of the socio-cultural mechanisms giving rise to this subculture; and, by means of an especially-developed questionnaire, attempts to assess the nature of the relationship between membership of this subculture and scores on cognitive and language tests, and on other educational and psychological indices. The specific procedures and instruments that were adopted, and the rationale underlying their use, are discussed more fully later in the Chapter.

A third principle emerging from the discussions undertaken in Chapters 2 to 4 concerns Nurcombe's observation that it is "artificial to think of knowing stripped of feeling" (1976, p.59). The cognitive dimension of an individual's personality interacts with, and is dependent upon, both its conative and affective dimensions, and therefore needs to be considered in relation to them. Together, they form an integrated system of interlocking and mutually reinforcing parts. Like the cognitive domain, these other dimensions of personality are greatly influenced by an individual's interactions with his environment. They tend, therefore, to reflect the particular emphases of the ecological pressures and sociocultural influences bearing upon him.

Motivational orientations are especially important. Not only do they appear to play an important role in either inhibiting or facilitating the expression of competencies, but they also may play a role in the realisation of these competencies. They may, for example, mediate between the environment and cognition by acting as internal 'energising', orientating and reinforcing mechanisms that selectively

determine the experiences an individual is likely to seek or avoid, thereby influencing the nature of the accommodations required of his cognitive structure.

Although an investigation of such hypotheses is beyond the scope of this inquiry, it is clear that studies of competence would benefit by the inclusion of data on other personality variables. In addition to providing greater depth and perspective to our understanding of the relationship between cognitive and other dimensions of personality, such data may shed light on the nature of the relationship between the cognitive and language competencies of Aboriginal children on the one hand, and their academic achievement on the other. It is insufficient simply to assume that, because cognitive tests are good predictors of the educational attainment of European Australians, they also will predict well for Aboriginal children. The research of Wright and Parker (1978), referred to previously, for example, suggests that the school performance of Aboriginal children may depend less on their intellectual capacity than on other personality characteristics (perhaps because of the extra difficulties they need to overcome).

Consequently, following on from the directions suggested by the concept of a culture of poverty; by the literature on the socio-cultural characteristics of Aborigines (Chapter 4); and by Wright's and Parker's study, the research reported herein includes a measure of a personality variable related to feelings of dependence and helplessness, called 'locus-of-control'. As pointed out in Chapter 4, it refers to an individual's orientation towards feeling either in command of, or at the mercy of his environment. The relationship of locus-of-control orientation to performance on cognitive or language tests, and to scores on other educational and sociocultural indices therefore was examined.

A fourth principle of importance arising from the literature reviews and discussions in Part A is that test instruments and procedures need to be appropriate for the population tested. As noted in Chapter 2, the material content of many tests and the circumstances of their administration contain inherent biases favouring some groups, usually the middle class of Western culture, over others. Two complementary procedures can help in the reduction of this bias: the first is to select or modify tests and testing situations to suit differing groups; and the second is to select groups for comparison that have sufficient similarities in their backgrounds to suggest that both would be equally familiar with existing tests and testing situations.

Both strategies were taken into account in the choice of tests and the populations studied in this investigation. The Aboriginal children studied belonged to a community that has had long and continuous contact with White Australian rural society; they were familiar with the practice and requirements both of schooling and of testing. In addition, care was taken to ensure that the content and materials of the cognitive and language tests selected for the study contained no unfair biases favouring either the Aborigines or a control group of low-socioeconomic rural White children. Scholastic status was assessed by obtaining teacher ratings of the students' number and reading abilities, and application to school work. A measure of their absentee rates from school also was taken. Each of these measures is discussed more fully later in the Chapter.

5.1.1 Objectives:

Essentially, then, Part B of this inquiry is designed to expand on previous knowledge in the field of Aboriginal education by helping to fill in gaps left from earlier research in knowledge of

sociocultural, linguistic, cognitive and motivational influences on the school performance of Aboriginal children. But it is more than a study of the psychosocial underpinnings of their scholastic status, for it also investigates the interrelationships between these psychosocial variables, and the context in which their development takes place. Thus, in addition to investigating the relationships between indices of school attendance, number and reading skills, application to school work, cognitive and language performance, and locus-of-control orientation, for a group of Aboriginal children and comparing the results with the findings for a comparison group of White children, this inquiry explores the social background of the Aboriginal children in greater detail than previous inquiries in this field have done. In particular, it investigates, from an historical perspective, the nature of the contact between the community to which these children belong and rural Australian society, in an attempt to identify the nature of the principles underlying the mutual adaptations of both groups. In so doing, the study also seeks to provide information, historical as well as educational, on a community for which such information was lacking.

5.1.2 Interdisciplinary Orientation:

As such an investigation represents a confluence of various disciplinary areas of inquiry, an interdisciplinary approach that incorporates elements from history, anthropology, sociology, psychology, linguistics and education was developed. As pointed out in Chapter 1, freed from the rigid methodological and conceptual constraints of a single discipline, such an approach enables greater flexibility as it offers the advantage of insights, concepts and tools from several

disciplinary perspectives, some of which were discussed in depth in Part A of this work. It enhances the capacity for this inquiry to overcome the limited scope of previous research in this field by enabling a more comprehensive analysis of the multi-dimensional dynamic processes that interact to influence academic potential and performance. It also reflects a recent trend in both the natural and social sciences towards integrating segmented knowledge gained from fragmented disciplinary fields to form composite wholes that benefit from the varying approaches, emphases and contributions of these several disciplines. This trend balances, to some extent, an earlier swing away from imprecise, quasi-scientific generalisations that characterised the beginnings of some fields of scientific inquiry last century and towards the compartmentalisation of knowledge that occurred with the increasing specialisation of the disciplines.

But interdisciplinary integration within the confines of a single research project does not occur without some drawbacks. Often the questions asked about particular topics vary greatly between disciplines and need to be compromised somewhat if they are to become compatible. Similarly, the data they focus on are not always commensurable, necessitating further compromise in the form of particular emphasis on those kinds of data that can be integrated readily. In addition, while an interdisciplinary approach allows a more extensive investigation of the many variables that may be influential in a given sphere, it mitigates against intensive studies of individual variables. Thus, although this study makes use of concepts from anthropology and methods from historiography, it does not explore to the same depths as would the anthropologist or the historian those elements of the study to which their concepts or methods contribute.

Such limitations are inevitable, however, if the study is to maintain coherence and manageable proportions. An over-emphasis on questions of a purely sociological, historical or anthropological nature would result only in superfluous information, unrelated to the main focus of the inquiry. As noted previously, in addition to concentrating on the interrelationships between various educational, cognitive, language and motivational indices, this study focuses on questions concerning the social background of the Aboriginal children tested, only in so far as these questions may shed light on the nature of the socio-cultural forces shaping this background, and hence, contributing to the development of orientations and competencies represented by the above indices. Thus the inquiry has both a quantitative component and a social-history component. The nature of the data sought in each dimension, along with the instruments and procedures that were utilised, are discussed in detail below, following a brief description of the setting in which the study was undertaken.

5.2 THE SETTING

The location of the study was the Far South Coast of New South Wales and, in particular, the shires of Imlay and Mumbulla, the Municipality of Bega⁽¹⁾ and Wallaga Lake Aboriginal Reserve.⁽²⁾ Stretching over a length of approximately 230 kilometres, this region consists of a coastal plain that rarely exceeds 40 kilometres in width. It includes a somewhat isolated set of rural communities that have largely been neglected by social researchers and for which much information consequently is lacking. Testing was conducted in each of the three major towns in the region with a significant population of Aboriginal

(1) These have since been amalgamated to form the Shire of Bega Valley (New South Wales Department of Local Government, 1981).

(2) This settlement lies on the southern boundary of Eurobodalla Shire.

schoolchildren - Eden, Bega and Bermagui - which in 1976 had populations of about 3,000, 4,250 and 550 respectively. At the time of the study, Eden was an important and growing centre for fish canning and wood pulping, situated on the northern edge of Twofold Bay. Bega, situated about 20 kilometres inland from an old coast port at Tathra, is the centre for a rich beef and dairy producing area, and Bermagui is a small coastal fishing village. The number of Aborigines in the area at this time was about 440 (Australian Bureau of Statistics, 1976, 1978).

With the exception of the approximately 85 residents of the Aboriginal Reserve situated on the north shore of Wallaga Lake, Aborigines in the area have tended to live in small, widely scattered groups that varied in their degree of proximity to European settlements. Over recent years, however, most have moved into towns, and their children have begun attending schools in which the substantial majority of pupils are White. Children from the settlement at Wallaga Lake travel the 16 kilometres to Bermagui each day to attend school.

5.3 THE QUANTITATIVE DIMENSION

Quantitative data were gathered in three phases. In the first, comparison groups of Aboriginal and White children were given a series of individually administered tests designed to sample cognitive and psycholinguistic abilities and a questionnaire that sought to determine their locus-of-control orientation. In the second, teachers and school records were consulted to gather information about the scholastic status and school attendance of these children. Finally, parents of most of the children tested were located and interviewed, using a quantifiable questionnaire based on the culture of poverty concept.⁽¹⁾

(1) Additional information which is discussed more fully under the Socio-Historical Dimension subheading (5.6) of this Chapter also was gathered from parents.

The sampling, instruments and procedure are discussed below.

5.3.1 The Sample:

All available Aboriginal children attending Eden, Bega and Bermagui primary schools and aged from approximately six to ten years were given the test battery and questionnaire. A control group of non-Aboriginal children, whose fathers' occupations were either semi-skilled or unskilled according to Congalton's (1963) scale, also were included in the study. They were selected at random from similar age, sex, school, and grade groupings from which the Aboriginal children came. Many of the Aboriginal children had no male parent living with them; others had fathers who were unemployed; and none had fathers who were in other than unskilled or semi-skilled employment. The age and sex composition of the two groups and the numbers attending each school are presented in Table 5.1.

TABLE 5.1
DESCRIPTION OF SAMPLE BY
AGE, SEX, ETHNICITY AND SCHOOL ATTENDED

Age	Group	Sex	Eden		Bega		Bermagui		Total			Grand Total
			A	W	A	W	A	W	A	W	T	
5:6 -	6:5	M	1	3	3	3	2	1	6	7	13	27
		F	2	2	2	2	3	3	7	7	14	
6:6 -	7:5	M	3	3	1	1	1	1	5	5	10	18
		F	-	-	2	2	2	2	4	4	8	
7:6 -	8:5	M	3	3	-	-	1	1	4	4	8	16
		F	1	1	1	1	2	2	4	4	8	
8:6 -	9:5	M	3	3	2	2	-	-	5	5	10	26
		F	1	1	3	3	4	4	8	8	16	
9:6 -	10:5	M	3	3	1	1	4	4	8	8	16	24
		F	2	2	2	2	-	-	4	4	8	
Total			19	21	17	17	19	18	55	56		
Grand Total			40		34		37					111

5.3.2 The Test Battery:

The test battery consisted of two measures of cognitive development and three of language abilities. The cognitive gauges were the Nixon Test of Reclassification (Nixon, 1968) and a modification of the Inhelder and Piaget Matrices Test of Multiple Classification (I & P Matrices - Inhelder and Piaget, 1964; de Lacey, 1969). Both are based on Piagetian theory and test the ability to classify objects. They were selected, both because of their content validity, and because their presentation allows for considerable flexibility in attempts to evoke the optimal response from each child. In addition, they have been found to be very sensitive to sociocultural differences between groups. The materials that comprise them were judged to have similar familiarity for both groups. The Nixon Test was given to the six- and seven-year-olds, and the I & P Matrices Test was given to the older subjects. Each test is discussed more fully later in the Chapter.

The language tests comprise the Peabody Picture Vocabulary Test (PPVT - Dunn, 1965) and two subtests of the Illinois Test of Psycholinguistic Abilities (ITPA - Kirk et al., 1968). The PPVT was selected primarily because of advantages offered by its administration procedures and its utility as a gauge of familiarity with Western middle-class culture and Standard English. The two ITPA subtests were Auditory Association (AA) and Verbal Expression (VE). By sampling selected language abilities, the ITPA subtests allow for a more specific and complete analysis of the psycholinguistic abilities of both groups in the inquiry. The three tests were given to all subjects and, like the classificatory tests, are described in greater

detail below. All the tests in the battery have been used successfully in previous research with Aboriginal and non-Aboriginal children (de Lacey, 1972), thereby facilitating comparability of the results.

5.3.2.1 Testing Conditions:

Most of the testing was conducted in the privacy of an enclosed room, with the tester and testee sitting facing each other across a corner of a table. Time taken to administer the battery varied from about half an hour to three quarters of an hour. The younger, more timid Aboriginal children tended to take longest and some did not complete the test battery. Other Aboriginal children could not be tested as they were absent from the school at the time the research was conducted.

5.3.3 Classification and Cognitive Development:

As noted in Chapter 2, the ability to classify represents an important gauge of cognitive development. According to Piagetian theory, a child gradually learns to decentre his attention and to focus, by about the age of seven, on more than one element in a situation. Correspondingly, his ability to classify progresses from simple, single-criterion classifications to classifications involving several criteria. Consequently, classificatory ability serves as an important indication of the evolution of logical structures that play such a crucial role in the child's understanding of his world and which are manifest in such skills as the ability to manipulate numbers. In addition, classification is readily accessible to testing as, once the basic operation has been acquired, it tends to change along a quantitative rather than a qualitative dimension.

5.3.3.1 The Nixon Test of Reclassification:

Developed by Nixon (1968, 1971), the Nixon Test of Reclassification is designed to assess the ability of children to reclassify the same material on several occasions using a single, though different, criterion each time. Inhelder and Piaget (1964) claim that operational thought is evidenced by the flexibility required to anticipate such classifications. The test was designed as a gauge of the cognitive development of children aged from about four to seven years, as they pass from preoperational to concrete-operational thought. As the materials and procedures have been described adequately and completely elsewhere (Nixon, 1968, 1971; de Lacey, 1969), it is necessary only to describe them briefly here.

The test material consists of twenty small wooden rods that vary along three dimensions - colour, diameter and length. The child is first introduced to the rods and a check made that he is aware of terms used to describe them. He is then given a practice item to familiarise him with the requirements of the test. The test proper involves the completion of six tasks. On each occasion the subject is presented with two mutually exclusive classes of rods (e.g. one red group and one white group) and is then asked to rearrange the rods according to a new criterion which is indicated by the tester when he places before the child two rods (exemplars) taken from one of the two groups. The exemplars differ according to only one attribute (e.g. diameter). The child is asked to group like rods round each exemplar. If he is incorrect, or gives up on his first attempt, he is given a second chance.

Nixon allows for two scores: one for grouping the rods correctly, and another for explaining correctly why they are grouped. According to Inhelder and Piaget (1964), the latter requirement is the mark of the true operational thinker and for the purpose of this study, only this score was used. The reliability of the Nixon Test has been demonstrated by Nixon (1968); and de Lacey (1969) reports that in addition to having content validity as defined by Anastasi (1968), the test accords well with other classificatory measures that have produced results similar to those found by Piaget. The materials are unlikely to disadvantage unfairly either ethnic group in this study, and previous studies indicate that the test distinguishes well between preoperational and operational thinkers in both groups (for example, de Lacey, 1969). In addition, the test has been found to be sensitive to the effects of varying sociocultural milieus when broad differences have been taken into account (de Lacey, 1969), and hence may be sensitive to finer sociocultural distinctions.

5.3.3.2 The I & P Matrices Test of Multiple Classification:

This test represents a slight modification (de Lacey, 1969) of one originally described by Inhelder and Piaget (1964). It is designed to assess a child's ability to classify objects according to more than one criterion and therefore is more appropriate for older children than is the Nixon. Like the Nixon Test, it has been described fully elsewhere (Inhelder and Piaget, 1964; de Lacey, 1969), and needs to be described only briefly here.

It consists of nine multiple-choice items, the first of which is a practice item. Each item contains an item stem that is composed of from three to five elements representing common geometrical figures

(such as circles or squares) or everyday three-dimensional objects (for example, fruit, animals) that are arranged in an interrelated way, and a blank space, into which the subject is asked to place the most suitable of a number of accompanying optional shapes. The first four items and the practice item require the use of two criteria to select the correct option (for example, size and shape, or shape and colour), while the last four items require the use of three criteria (for example, colour, direction and shape). De Lacey's modifications were designed both to overcome shortcomings⁽¹⁾ in the published version of Inhelder's and Piaget's (1964) test, and to replace item elements likely to be differentially familiar to Aboriginal and White Australians by others thought to be equally familiar to both groups.⁽²⁾

Administration was similar to that described by Inhelder and Piaget (1964) in that the subjects were first shown each item stem and its corresponding options and then asked to select the correct option and to justify their choice. Inhelder and Piaget test for stability of choice, by further asking the subject, after he has made his choice, whether other options might fit as well or better. However, previous research has indicated that the social situation or interpersonal cues often appeared to outweigh formal test requirements in influencing responses by Aboriginal children. De Lacey (1969), for example, found that many Aboriginal children appeared to interpret further questioning about their response as a signal that the examiner was displeased with it, and that, as a result, many subsequently changed their answer. The

(1) These included the replacement of identical 'options' with dissimilar ones and the selection of colours for elements whose colouring was unclear from Inhelder's and Piaget's (1964) black and white photographs.

(2) For example, a lemon replaces a pear in item four, and hands and feet replace tulips and anemones in item nine.

additional question asked by Piaget and Inhelder, therefore, appears to tap cultural attributes as much as cognitive characteristics, and since stability of choice was not a primary concern of this inquiry, the question was discarded. Thus, as with the Nixon Test, only the operational response (justification of correct choice) was scored.

In addition to having content validity⁽¹⁾ the I & P Matrices, like the Nixon, has produced results which are similar to those described by Inhelder and Piaget (1964) for like populations, and which correspond to findings from other tests of classification (de Lacey, 1969). Reliability has been more difficult to gauge for, as de Lacey (1969) points out, consistency of response to a particular kind of question is not a characteristic of children in the transitional stages of cognitive development in terms of Piagetian theory. Nevertheless, as the test derives directly from Piagetian theory and has previously been used successfully with Aboriginal children, it was considered suitable for this inquiry.

Following Piaget's lead, most researchers have presented the results from tests like the Nixon and I & P Matrices in terms of the percentage of tasks that were solved operationally by a given group. They then compared different groups (age or ethnic) according to these percentages. A major task of this inquiry, however, is to examine the interrelationships between variables for the same group. Hence, analyses were based on the number of operational responses made by individuals on each test.

(1) The test items are derived directly from Piagetian theory.

5.3.4 The Peabody Picture Vocabulary Test:

Although claims that the PPVT is a test of 'intelligence' appear to be exaggerations (Teasdale, 1969), the test has been shown to yield results in agreement with well-established measures of 'intelligence' (especially those with a high verbal component), and it does correlate well with school achievement (Dunn, 1965). Essentially, however, it is a test of vocabulary, or, more specifically, of the ability to recognise pictorial representations of words. For the purpose of this inquiry, therefore, it was considered to be primarily a test of knowledge of Standard English. Many of its items also tend to be 'loaded' in favour of Western middle-class culture. Consequently, the test provides a useful gauge of the familiarity both non-middle-class groups, sampled in this study, have with both the language and culture of the dominant group. As this knowledge both facilitates school performance and is advantageous in later years with regard to the acquisition of status, wealth and power in the broader society, it represents an important variable to be assessed in this inquiry that complements the less-culturally bound cognitive gauges. For, whereas the classificatory tests serve to indicate the existence or otherwise of the cognitive prerequisites for academic success, performance on the PPVT indicates the degree to which such cognitive skills are actually being put to use to meet the requirements for success in a middle-class-dominated social milieu.

Each item in the test consists of a series of four drawings depicting various objects or situations. Detailed discussion of the nature and selection of these items appears in the manual for the test (Dunn, 1965), and need not be repeated here. The tester is required

to read aloud a word from one of two parallel word lists⁽¹⁾ available for the test, and the subject is required to state the number of, or point to, the picture to which it refers. As the test progresses, the words become more difficult and testing continues until six out of eight consecutive responses are incorrect.

Although Australian norms have yet to be published for the test, a considerable body of data on Aboriginal test performance has been accumulated and the test has been found to be both reliable, and sensitive to environmental differences experienced by the children tested (de Lacey et al., 1972). The absence of Australian norms is not crucial to this study, as it proposes to compare the performance of two groups using the same gauges, and to examine the interrelationships between the scores on these gauges; rather than to compare the performance of these children with that of the general population. An additional advantage of the PPVT is that it serves as a useful starting point for rapport-building and testing, especially with the younger, more timid children, since it maintains interest, is of short duration and, as noted previously, does not require a verbal response.

5.3.5 The Illinois Test of Psycholinguistic Abilities:

The Illinois Test of Psycholinguistic Abilities (ITPA) was designed as a diagnostic tool (McCarthy and Kirk, 1961). It sought to determine strengths and weaknesses in children's communication abilities with a view towards remediation where necessary. A revised and expanded version had a similar goal, but in addition to testing

(1) Form A was used for this inquiry.

discrete cognitive abilities, it was considered to be a "molar test of intelligence" (Kirk et al., 1968, p.5).

Its construction is based on a modification (by Kirk et al., 1968) of a theoretical model of the communication process first described by Osgood (1957a, 1957b). According to this more educationally-oriented revised version, cognitive abilities have three dimensions. The first concerns the human channels through which communication flows. Channels sampled by the test include auditory input - vocal output channels, and visual input - motor response channels. The second dimension consists of psycholinguistic processes, three of which play a major role in communication. The first two, the receptive and expressive processes, have been discussed in Chapter 3. The third is a mediating process in which linguistic symbols, concepts and percepts are manipulated and organised to enable an appropriate response to the information received (along the lines discussed in Chapter 2). This third dimension consists of two levels of organisational complexity at which the mediational process operates. One, the representational level, is a complex process involving the manipulation of symbols, while the other, the automatic level, although highly integrated and organised, tends towards being an habitual or mechanical response, requiring little conscious thought.

Of the ten subtests and two supplementary tests that were generated by this model and which comprise the ITPA, two were selected for inclusion into the test battery. They were the Auditory Association (AA) and Verbal Expression (VE). Both were designed to sample the more complex representational level of cognitive functioning via the auditory-vocal channels. Consequently they enable an examination of conceptual and language abilities required for success in the

school context. The AA examines the organisational process and the VE the expressive process. Some controversy surrounds the applicability of United States norms on these tests to the performance of Australian children (Elkins, 1974, 1976; Teasdale and Wray, 1975; Teasdale et al., 1978; Teasdale and de Vries, 1976). But this does not detract from their value as instruments for comparing the performance in prescribed language areas of different groups, or for examining the interrelationships between one group's performance on these tests and their scores on other gauges, especially if raw scores only are used. In addition, as noted earlier, performance on both the AA and the VE has been found to be especially sensitive to environmental changes, as occur, for example, with 'enrichment preschooling' (Nurcombe et al., 1973).

5.3.5.1 Auditory Association:

The AA consists of a series of progressively more difficult word analogies. Each item comprises a complete sentence followed by an incomplete one. The subject is required to complete the analogy by adding an appropriate word. Hence, it requires that he recognise a common set of properties linking his answer and the clues that he is given, and thus samples a form of classificatory ability in which concepts presented orally are to be related. But unlike the classificatory gauges discussed previously, its contents assume a knowledge of Standard English and middle-class culture. Thus, the structure of sentences, their semantic content, and the expected answers, all tend to reflect an urban middle-class bias. The AA consequently plays a valuable role in complementing these less-culturally-biased cognitive tests for, whereas they tap a general capacity to classify, it samples actual classificatory performance in contexts attuned to the demands of the dominant culture.

5.3.5.2 Verbal Expression:

The VE subtest was selected for this inquiry because it is a less culturally bound measure of conceptual and language abilities than the PPVT or AA. Like the Nixon and I & P Matrices, it seeks to tap a general competence rather than knowledge of a culturally regulated set of conventions associated with the expression of this competence. Specifically, it assesses the ability to use language generally, as opposed to Standard English specifically, to communicate concepts vocally. It also assesses the ability to recognise or recall properties, functions or relationships of selected objects; or more generally, the ability to formulate concepts related to familiar objects. Hence, of all the ITPA subtests, this one serves best as a measure of language production and divergent thinking.

The test comprises four items (button, ball, block, envelope) and one practice item (nail). The subjects are asked to describe each object and to suggest associated qualities or uses. The quantity of the qualitatively different concepts they introduce in their descriptions forms the basis of scoring. Grammar used in responses is unimportant and the test items are likely to be equally familiar to children from a wide range of cultural backgrounds. Familiarity with the demands of such tests and willingness to accede to these demands may vary according to cultural differences, but the high level of contact of the Aboriginal group, the non-middle-class orientation of the White group, and the fact that members of both groups live in the same area and attend the same schools is likely to have kept these differences to a minimum.

Thus the test battery given to each child consisted of four gauges - the three language tests and one of the two cognitive tests. The cognitive gauges and the VE aimed at providing less culture-loaded

assessments of existing general competencies related to classification and language respectively. The PPVT and the AA, on the other hand, were included to assess the degree to which these competencies were being applied in the expression of skills favoured by the dominant group in Australian society and which correspond to the demands of the schooling situation.

5.3.6 Locus-of-Control Scales:

Two complementary scales were used to determine the locus-of-control orientation of both groups of children. One was an abbreviation of the Children's Nowicki and Strickland Internal-External Control Scale (CNS-IE - Nowicki and Strickland, 1973) and the other was the Preschool and Primary Internal-External Control Scale (PPNS-IE - Nowicki and Duke, 1974). Both contain many elements that overlap and were designed to assess children of different ages.

The CNS-IE is a forty-item pencil-and-paper test requiring a 'yes' or 'no' response for each item. The questions comprising the items cover a broad range of "reinforcement situations across interpersonal and motivational areas such as affiliation, achievement and dependency" (Nowicki and Strickland, 1973, p.149). Nowicki and Strickland report that it is a valid and reliable instrument for measuring locus-of-control orientation for children from Grade 3 to Grade 12, and add with caution that it also may be useful for Grades 1 and 2.

Based upon further analyses of their data, in which item variance estimates and item-total correlations for each item were calculated and grouped according to the findings for each Grade, two condensed versions of the scale appropriate for different age groups

were constructed. One, containing twenty items, enabled a quick, valid and reliable measure of locus-of-control orientation for children in Grades 3 to 6, while the other, containing twenty-one items, was suitable for Grades 7 to 12. In an attempt to reduce the time needed to complete the test battery in this inquiry, and as none of the subjects were in Grades above 5, it was decided to use the shortened version of the CNS-IE that was appropriate for the younger children, rather than the complete scale.

In addition, in view of the cautionary remarks made by Nowicki and Strickland (1973) concerning the applicability of the CNS-IE for children below Grade 3, its use was restricted to the two older age groups in this study, most of whom were in Grade 3 or above. A related scale, the PPNS-IE, was used to determine the locus-of-control orientation of the younger three age groups. Its utility, reliability and validity as an instrument for assessing locus of control for children aged from four to eight years is discussed in detail by Nowicki and Duke (1974).

Like the CNS-IE, it is a pencil-and-paper test, requiring 'yes' and 'no' responses, that can be group administered, but unlike the CNS-IE, it incorporates a cartoon format more suitable for its younger 'clientèle' than the visually-unaided written statement of the CNS-IE, when administered in this way. Nevertheless this procedure was considered inappropriate for this inquiry. Lack of adequate space for group testing, the time-consuming and disruptive task of gathering together subjects from many different classes, and the expected low levels of reading ability of the subjects in the study, especially the

younger ones, combined to preclude group administration of both scales. Consequently, along with the classificatory and language tests, both locus-of-control inventories were administered individually with the questions read out and the answers recorded by the examiner. This procedure proved adequate and ensured that all questions were understood and answered.

As noted earlier, both scales contain many elements that correspond. Twenty out of the twenty-six locus-of-control items contained in the PPNS-IE are either identical to, or very similar to, items in the full CNS-IE scale. Of these, fourteen also are contained in the abbreviated version of the CNS-IE scale used in this study. Not surprisingly, the PPNS-IE and the full CNS-IE correlate highly when given to the same children in their overlapping eight-year-old age range. Clearly, both scales offer valuable complementary measures of the same psychological characteristic in children of different ages.

Unfortunately, Nowicki and Strickland (1973) identify only nineteen of twenty items of the CNS-IE that they state comprise the condensed version suitable for younger children. As it did not prove possible for the present author to determine the twentieth item at the time of the study, only nineteen locus-of-control items were included in the scale used in this study. In an attempt to disguise the intent of the PPNS-IE, Nowicki and Duke (1974) have interspersed eight questions from a Social Desirability scale (Crandall et al., 1965) among the locus-of-control items. For the same reason, and for the sake of consistency, these questions were retained in the PPNS-IE and added to the condensed CNS-IE used in the study. In the latter scale, they also serve to hinder the development of a response set that may otherwise occur for, unlike the PPNS-IE, many of the locus-of-control

items in the CNS-IE are keyed for a 'yes' answer to indicate externality. Owing to the incomplete number and pragmatic nature of the inclusion into the study of the Social Desirability questions, they were not included in the analysis of results. Scoring of both locus-of-control scales reflects externality, such that the higher is the score, the more externally oriented is the individual.

5.3.7 Scholastic Status and School Attendance:

The second phase of the quantitative assessment involved gathering data on the scholastic status and school attendance of the children tested. The source of data for this part of the inquiry was information obtained from the classroom teachers of the children who took part in the study. Their assessments of the academic status of these children and their class rolls provided the basis of this data.

Specifically, the teachers were asked to rate the number and reading abilities, and application to school work, of children in their classes who were selected as subjects for the inquiry, on a five-point Likert-type scale, as being very poor, poor, average, good, or very good. Quantification of these ratings was achieved by giving 'very poor' a score of 1, 'poor' a score of 2, and so on, up to 'very good' which had a score of 5. Subjects who were placed in an in-between category, such as 'good to very good', were given a score that represented the average between the two characteristics. In this case it would be 4.5.

The specific questions asked of the teachers were as follows:

- (a) Based on his (her) school performance, how would you rate (name of child)'s number abilities on the following scale, relative to the average for his (her) age group?
- (b) Using the same scale, and again, based on his (her) school work, how would you rate (name of child)'s reading ability compared to the average for his (her) age group?
- (c) Finally, how does (name of child)'s application to his (her) school work rate on the scale, compared to the average for his (her) age group?

It was made clear when asking the questions that they referred to overall performance in each subject area. Reading, for example, referred to comprehension as well as to the ability to vocalise written words correctly. After each question was asked, the option on the scale were read out by the interviewer, who then recorded the teacher's answer.

The utility of teacher ratings as a gauge of scholastic status is well documented (McIntosh, Walker and Mackay, 1962). They have been used successfully in previous studies of Aboriginal scholastic status (e.g. Tannock and Punch, 1975) and currently form the basis of much formal assessment in modern schools. In New South Wales, for example, both the School Certificate and the Higher School Certificate depend to a high degree on teacher assessments of student performance. This is even more the case in primary schools, where they form the basis of virtually all assessments.

As well as meeting the requirements of this study for a uniform gauge across different age ranges, teacher assessments have the advantage over individual tests of performance of being the product of conclusions reached over a long period of time on the basis of the children's everyday work, their performance in semi-formal 'quizzes' and the teachers' subjective knowledge of the children concerned. Although this subjective quality of teacher assessments may be thought to detract somewhat from their validity as measures of student

scholastic status, this detraction is likely to be minimal in view of research findings which have demonstrated consistently that teacher expectations of student performance have an important bearing on the actual performance of pupils (Rosenthal and Jacobson, 1968). Formal tests, on the other hand, have the disadvantage of sampling only a small range of children's work, and usually only the once. Such limited samplings, therefore, may give a distorted picture of a child's overall ability in a particular subject area, or simply may reflect a child's poor performance on a specific day owing to ill-health, anxiety, or some other reason unrelated to his knowledge.

The two questions dealing with number and reading abilities thus form an important complement to the AA and PPVT in attempting to assess forms of performance that are more attuned to the school context than are the more general forms of cognitive or language performance assessed by the Nixon, I & P Matrices and VE. By providing an added dimension to the quantitative assessment of the scholastic abilities of the children in the study, they enable conclusions relating to the antecedents of this status to have a firmer, more comprehensive basis. The third question was included to examine how important application to school work was to actual performance for both groups in the inquiry, and to determine its relationship to competency levels, locus-of-control orientation, and social background.

School attendance records of the children also were obtained. They were considered an obvious variable that should not be overlooked in attempts to determine important influences on scholastic status. Clearly, the longer a child is absent from school, the less likely he is to do well there. What is less clear, however, particularly in relation to Aboriginal children, are the reasons for this absence. Poor health is an obvious candidate, but this tends to reflect living

conditions. An unrewarding school environment also has been suggested as a reason for high absenteeism among Aboriginal pupils. It may be, for example, that children who are more able than others are more sensitive to cultural differences between their home and school environments and therefore remain away from school to solve the conflict; or that children with an internal locus-of-control orientation, who have stronger feelings of control over their lives, avoid school. Clearly there are many other possible explanations for this absenteeism that are more peripheral to the reach of this inquiry. Nevertheless, even within its limited scope, important insights into the underpinnings, extent and effects of absenteeism may be gained, by exploring its relationship to other variables assessed in the study.

The specific measure of absenteeism used in this inquiry was the number of days a child was absent in the second term. On the few occasions where these data were not available, the number of days a child was absent during the first term was taken as the gauge. The second term was preferred, however, because it was thought that first-term absences may be inflated for some children as a consequence of late enrolments, late return from holidays, or similar reasons, while early leaving may have increased absenteeism in third term. In addition, second term is longer than the other two and therefore more school work is covered. Long absences during this period, therefore, may be more damaging to school performance than in first or third terms.

5.3.8 A Culture of Poverty Scale:

The third phase in gathering quantitative data formed part of an intensive interviewing programme of the parents or guardians of most of the children tested during Phase 1. The interviews had two components. The first was directed at rapport-building and gathering

data as part of the sociohistorical analysis of the Aboriginal community. It included questions that focused on such matters as employment histories, migratory habits, attitudes and outlooks. These questions were asked informally, and at times varied from one individual to the next. Along with other sources of data tapped as part of the historical dimension of this inquiry, this component of the interviews is discussed more fully later in the Chapter.

The second feature of the parental interviews was the inclusion of a series of questions based on Oscar Lewis' concept of a culture of poverty. Together with some observations by the interviewer of the material living conditions of the respondents, that also were based on Lewis' concept, they constitute the Culture of Poverty Scale (CPS). As demonstrated in Chapter 4, Lewis' model offers a useful framework for structuring inquiries into the social background of Aborigines. But despite the widespread recent adoption by Australian authors of Lewis' term to describe the sociocultural environment of Aborigines, no attempt has been made to relate characteristics of Aboriginal subculture, based on the culture-of-poverty model, to the performance of Aboriginal children on tests of cognition or at school.

Lewis used a variety of (unpublished) questionnaires and a series of intensive interviews and detailed observations of individual family members in his own research, but such an approach required resources and examined variables that were well beyond the scope of this inquiry. Nevertheless, in addition to providing useful insights into, and guidelines for, an investigation of the emergence of the sociocultural traits of a group of Aborigines, his concept offers the potential for developing a sociocultural gauge that, compared to scales used previously in studies investigating the relationship between the abilities and social background of Aboriginal children, would have

greater theoretical support, would be more precise, and would have greater sensitivity to variations in the home backgrounds of relatively high-contact Aboriginal groups.⁽¹⁾ Thus it would enable comparisons within a community, as well as between communities, to be made. In addition, it would have relevance for non-Aboriginal groups.

The CPS, therefore, represents an attempt to provide a quantitative assessment of a family's participation in the culture of poverty. It examines characteristics which individual families have in common with Lewis' model and provides a means by which the relationship between children's scores on psychological and educational gauges and their sociocultural background can be assessed.

But both the ingredients of Lewis' model, and the perspectives he adopts when describing it, hamper its direct translation to a single questionnaire format. As noted in Chapter 4, he describes the culture of poverty from four points of view: the individual; the family; the nature of the poor community; and the nature of its relationship to the dominant society. Consequently, the traits he describes comprise a wide range of economic, social and psychological variables that are not readily reducible to a single perspective. A considerable degree of selectivity and re-organisation of these traits was required, therefore, before the questionnaire could serve as a useful research instrument, while at the same time capturing the essential features of Lewis' model.

5.3.8.1 The Items:

As a first step in this process, the questionnaire was designed to focus on the family. The utility of the family as a unit

(1) See, for example, de Lacey's (1970a) Index of Contact, which was designed as an instrument that would differentiate well only between groups with widely varying sociocultural backgrounds.

of study is highlighted by Lewis' own methods. As he points out (Lewis, 1959), the family bridges the conceptual gap between culture on the one hand and the individual on the other. It represents a fundamental level of organisation in most social milieux and acts as a crucial socialising agent. It plays a vital role in shaping the competencies, orientations and outlook of individuals, therefore, and, since a major task of this inquiry is to learn more about the social background of Aboriginal children and its relationship to their cognitive development and scholastic status, the family constitutes a 'natural' focal point of the study.⁽¹⁾

Lewis does not provide a definitive listing of traits, but as noted previously, includes them as part of his narrative. They tend to vary, however, from one publication to another. A necessary step in attempting to quantify his model, therefore, is to produce a complete listing of the traits he describes. This listing, along with the publications from which they were obtained, is contained in Appendix A. As has been noted, and, as is obvious from an inspection of this list, considerable modification is required if the list is to be transformed into a format suitable for a quantifiable questionnaire. A reorganised, condensed and more coherent listing of these traits that formed the basis of the CPS is included in Appendix B. This second listing represents an attempt to overcome instances of overlapping and redundancy evident in Lewis' multi-perspective description of the culture of poverty, and reflects due consideration of Leeds' (1971) criticisms, noted in Chapter 4, of the logical sequencing of the traits as described by Lewis.

(1) The 'family' was defined as including: (a) all household members who were blood relatives of the child tested; (b) the 'social parent' rather than the absent biological parent in instances of remarriage or defacto relationships; and (c) household members to whom the child was related through the processes of adoption or of fostering.

Three additional criteria which the CPS needed to satisfy, if it was to function as a useful instrument, were (a) ease of administration, (b) equivalent applicability to both Aboriginal and non-Aboriginal groups, and (c) that any adult member of the family be able to answer it. To satisfy the first criterion, the scale was composed primarily of questions that required only a 'yes' or a 'no' response. These were supplemented by a few questions requiring one- or two-word answers other than 'yes' or 'no' and by some easily-made observations by the interviewer, primarily concerning the location and standard of housing. The questions were presented in the form of a structured interview with the answers recorded by the interviewer by circling 'yes' or 'no' or by inserting the respondent's answers in the spaces provided on the answer sheet.

This procedure was adopted in preference to having the interviewees fill out a form, for several reasons. In the first place, it was thought that it would assist in maintaining rapport and a sense of informality commensurate with the rest of the interview. Secondly, it circumvented the possibility that some parents would be unable to complete such forms. In view of the low levels of literacy among many Aboriginal adults, this was a likely occurrence, and its avoidance helped in saving both time and embarrassment. Thirdly, it ensured that all questions were answered; and finally, it enabled the interviewer to record his observations on the same answer sheet as the respondents' answers.

The second criterion required that considerable care be taken with both the content and phrasing of questions. Despite the fact that a major goal of this study was to learn more about the background of Aboriginal children, the questions could not be phrased under the

assumption that they need be appropriate only for Aborigines. A brief pilot study with a prototype of the CPS, based on the condensed listing of culture-of-poverty traits contained in Appendix B, was conducted to check that this requirement was being met. Questions found to be inappropriate for local conditions, or to be unduly oriented towards one or other of the two ethnic groups, were either rephrased or deleted. A question relating to membership of 'alternative' organisations, for example, was found to favour the Aboriginal population, most of whom belonged to an Aboriginal Advancement group that excluded Whites and had no White counterpart. Consequently it was rephrased to ask more generally about participation in organisations.

The third criterion imposed a limitation on the study that reflected both methodological and conceptual considerations. In the pilot study referred to above, it was found that some children belonged to single-parent families (not all with a female head). Others were looked after by grandparents. High levels of unemployment sometimes meant that the father was available for interview, while the mother was out. These findings were corroborated in the main study. It was impossible, therefore, to incorporate successfully into the CPS an assessment of how closely the psychological characteristics of individual family members approximated those described by Lewis as typifying members of the culture of poverty. In addition, whereas the family can readily be conceptualised as a single unit from a sociological point of view, this is less the case when a psychological perspective is taken. In the latter instance, the family comprises discrete elements that vary according to the variety and number of individuals it contains. Consequently, only sociological variables were incorporated into the CPS. Psychological characteristics reflecting a 'counter

quality' in the culture of poverty could not, therefore, be assessed directly, but only indirectly, by implication from sociological indices. Feelings of helplessness and dependence, however, although likewise only implied by CPS items, were assessed in the case of the children tested by the locus-of-control scales discussed previously.

5.3.8.2 Weightings:

Another difficulty in attempting to quantify Lewis' model is his failure to include a weighting system with the traits he describes. Nevertheless, a good indication of the importance of particular traits is indicated by the stress he gives them in his narrative. The three sociological traits that appear to be most emphasised by him are: marginality, or lack of participation in the institutions of the dominant society; lack of internal organisation of the poor community; and lack of wealth. From the perspective of the family, however, these can be reduced to two: lack of voluntary participation by family members in organisations of any kind beyond the extended family (whether these belong to the dominant society or the poor community); and lack of wealth. These two dimensions consequently form the principal components of the CPS and receive equal weighting. Two additional dimensions of the culture of poverty that receive less emphasis from Lewis also were incorporated into the CPS but were given correspondingly less weighting. They comprised items that were designed to provide indications of antagonism and dependence on the one hand, and of family structure on the other. The scale is keyed such that the higher a family scores, the more it has in common with Lewis' model. Each dimension of the scale, along with its composite elements and their respective weightings, are included in Table 5.2. The complete CPS form, together with some other questions included in the parental interviews, is contained in Appendix C.

TABLE 5.2

CPS CATEGORIES AND WEIGHTINGS

Categories		Yes	No
A Marginality and Non-involvement:			
(a)	Segregated housing	3	0
(b)	Membership of organisations		
	- trade unions	0	1
	- political party	0	1
	- social/sports clubs	0	1
	- other	0	1
(c)	Involvement with major institutions		
	- financial (have a bank account)	0	1
	- political (know name of Mayor/Shire President) (vote in Local Government elections)	0	1
	- health (privately insured)	0	1
(d)	Involvement with schools		
	- at least one parent has Intermediate Certificate	0	1
	- knowledge of children's grades at school	0	1
	- met teachers	0	1
	- regularly attend P & C meetings	0	1
B Deviance and Deprivation:			
-	legal authority (Police)	1	0
-	social welfare (Social Worker)	1	0
-	health (Community Nurse)	1	0
-	other (Employment, Education Officers, etc.)	1	0
C Lack of Wealth:			
(a)	Employment		
	- no-one employed full-time or part-time	2	0
	- unemployed longer than six months	1	0
	- one person employed part-time only	1	0
	- unskilled	1	0
(b)	Possessions		
	- own land	0	1
	- own a car	0	1
	- own a television	0	1
	- have a carpet in lounge/room	0	1
(c)	Budgeting		
	- buy food daily as need arises	1	0
	- unable to save	1	0
	- frequent difficulty with debts	1	0
(d)	Housing		
	- overcrowded (people:rooms \geq 1)	2	0
	- poor condition	1	0
	- rented	1	0
D Family			
-	matrifocal	1	0
-	extended	1	0
-	more frequent visits to maternal relatives	1	0
-	four or more children	1	0

From Table 5.2, it can be seen that the first of the major categories of the CPS - marginality and non-involvement - combines four sub-categories. They focus on the location of housing, membership of organisations, general involvement with institutions, and specific involvement with schools, respectively. With the exception of 'location of housing', each of these sub-categories is, in turn, composed of several discrete elements, and is weighted equally with the others. In the 'location of housing' sub-category, houses were classed as being either 'in town' or 'out of town'. To be classed as 'out of town', they needed to be situated at least 3 kilometres from the perimeter of the local township. This de facto segregation of habitation was considered an important variable to include in the CPS, not only because it echoed the physical isolation of the 'barrios' described by Lewis, which contributed to the development of the culture of poverty, but also because such isolation presents an important physical barrier to involvement in the broader community, especially in rural areas where long distances are often involved and efficient transport is not always available. Nevertheless, it was considered less important as an indicator of non-involvement or marginality than the combination of discrete elements that comprise each of the other three sub-categories and consequently was given slightly less weighting.

As noted earlier, an advantage of having the family as the unit of study is that the level of organisation of the poor community, and its relationship to the dominant society can both be gauged by the participation of family members in external organisations of any kind. Hence, the second sub-category concerned with marginality and non-involvement focuses on membership of organisations. The first three elements of this sub-category deal with organisations related to

occupation, politics and recreation respectively. The fourth, 'other', was sufficiently general to include membership of any exclusive or special interest group, including specifically Aboriginal organisations, so as not to favour one ethnic group over the other.

The relationship of family members to the dominant society is explored further in the third sub-category, which examines involvement with a sampling of major institutions in the broader society. Political involvement contained two elements, as it was considered to be especially important as an indication of social power and community involvement. The other two elements of this sub-category dealt with banking and health care. The fourth sub-category assesses in greater detail the involvement of parents or guardians with one particular institution, the school. Extra weighting was given to this institution, both because of its importance as a socialising agent for children, and because schools are primarily concerned with the development of number and reading skills, a focal point of this inquiry. Parental or guardian involvement with the schools, therefore, represents an important gauge of the nature of their relationship to the dominant society.

The second major category included in the CPS, 'Lack of Wealth', also encompasses four sub-categories: employment; possessions; budgeting skills; and living conditions. Again with the exception of one, all of these sub-categories are equally weighted. The exception, 'budgeting skills', receives slightly less weighting as these skills are less heavily emphasised by Lewis in his description of the culture of poverty than the aggregation of units comprising each of the other sub-categories. Hence, this sub-category contains three, rather than four, elements. They focus on financial management and savings, and

the accumulation of food reserves. The sub-category 'employment' comprises four items, two of which, 'unemployment' and 'part-time employment', are mutually exclusive. The other two items look at duration of unemployment and skill levels. In view of the importance of unemployment, both in limiting participation in the workforce and in inhibiting the accumulation of wealth, it receives double the weighting of the other items in this sub-category. The sub-category 'possessions' acts as a gauge of the material acquisitions of the respondents and comprises four equally-weighted items that examine the ownership or otherwise of four expensive though common products.

The final sub-category, 'living conditions', focuses on the standard, adequacy and status of dwellings occupied by the interviewees. The condition of the house was assessed by the interviewer and was classed as poor if in a state of disrepair or extreme shabbiness. A measure of overcrowding was used to determine its adequacy. Calculations based on the 1976 Census revealed that the average number of people per room in New South Wales dwellings was 0.578. A house was classed as overcrowded if the ratio of people to rooms was approximately double this average or higher (i.e. people:rooms is greater than, or equal to, one). As overcrowding represents an important variable in Lewis' descriptions, and as it incorporates two interacting elements - the number of people and the number of rooms in a house - it receives double the weighting of the other two elements in this sub-category. The status of the dwelling depended on whether it was owned (or being paid for), or rented. Rented accommodation in an Australian rural environment was considered to indicate less wealth than did ownership (intended or actual).

As noted previously, the CPS also incorporates two 'minor' categories. The first of these focuses on the degree of involuntary involvement by family members with government agencies concerned with deprivation or deviance. It represents an attempt to assess indirectly indications of dependence or antagonism, both characteristics typifying members of the culture of poverty. Unwanted attention from law enforcement agencies, manifest in this case by any members of the family who had been 'in trouble with the police' for other than a traffic offence, was thought to serve as a useful indicator of antagonism which family members may feel towards the broader society. A question inquiring into court appearances was discarded following the pilot study, in which it was found to 'put on the defensive' some interviewees, thereby disrupting rapport and casting some doubt on the veracity of their answers.

Reliance on social services was thought to provide a useful sociological indicator of feelings of dependence and helplessness. Involvement with such institutions was considered involuntary in the sense that in many cases it is necessary for sustenance when alternative coping strategies are absent. As conclusions based on indirect sociological assessments of essentially psychological characteristics are limited, and as locus-of-control scales were used to gauge feelings of dependence in the children tested, this category dealing with deprivation and deviance, although important, received considerably less weighting than the two major categories already described.

The second 'minor' category was concerned primarily with the structure and orientation of the family. It is composed of four items assessing characteristics which, according to Lewis, typify families in the culture of poverty. The first three include questions examining

the matrifocality and make-up of the family, and are taken directly from Lewis' descriptions. The fourth also looks at the make-up of the family, but represents an indirect assessment of the 'youngish' character of the family. If the number of children aged fifteen or less in the family equals or exceeds double the average number of children in New South Wales families (as indicated by the 1976 Census) when taken to the nearest whole number (i.e. $1.8 \times 2 = 3.6 \div 4$), the family is considered to represent a young population and is scored accordingly. Hence, families with four or more children fall into this group.

Although the nature of Lewis' description of the culture of poverty precludes the development of an exact quantitative replication of his model, the CPS does purport to be an accurate reflection of its essential sociological features. Although the weightings can be considered quantitative approximations only of Lewis' emphases in his narrative, a detailed attempt has been made to ensure that they are close approximations. The execution of validity and reliability studies concerning the scale was beyond the resources of this inquiry. Nevertheless, the representativeness and duly-considered weightings of the items in the scale strongly suggest that it provides an accurate indication of similarities between the families in the study and the populations described by Lewis as typifying members of the culture of poverty. Thus, the CPS serves as a useful instrument for quantifying these similarities that goes beyond earlier scales of the social background of Aboriginal families used in studies of their cognitive abilities and educational status. As such, it enables a more precise indication of variations in the family background of high-contact Aborigines and is based on a coherent sociological model of a specific subculture.

5.3.8.3 Interviewing Conditions:

The interviews comprised the most time-consuming section of the quantitative inquiry. Most were conducted over two sessions of four and five weeks respectively. The time taken for individual interviews and the conditions under which they were conducted varied greatly, depending on specific circumstances and the degree of information beyond the CPS that was sought. Some were conducted quickly on front doorsteps, others in the comfort of lounge rooms and a couple over lunch. Hence, some lasted up to two hours, while others took only about forty minutes. The time taken to cover the questions contained in the CPS, however, was relatively constant, averaging about half an hour. Interviews with Aboriginal parents generally took longer than with non-Aboriginal parents, since more information usually was sought from the Aborigines, and because many Aborigines appeared less concerned about the passing of time. Hence, rapport was less easily established if the interviewer appeared to be rushing.

Not all parents of children tested could be contacted in the time available. Long distances, coupled with an exceptionally rainy season (which led to severe localised flooding, washed-out bridges, cut roads, and widespread illness), substantially disrupted the interviewing programme. On some occasions, when parents were not at home at the time of visiting by the interviewer, follow-up visits were not always possible. Occasional lively greetings from friendly, though wet and muddy, pups, common in many of the rural households visited, did little to enhance the interviewer's appearance or demeanour for subsequent interviews and at times caused delays. Direct contact with parents living at Wallaga Lake Aboriginal Reserve was limited by the practice of having executives of their resident organisation act as spokespersons for the community.

Time restrictions, including the expedient one of conducting interviews during school hours to avoid disruptions caused by the demands of the children when home, together with the fieldwork limitations listed above, meant that, while the parents or guardians of most Aboriginal children (with the exception of many residing at Wallaga Lake) were interviewed, only a representative sample of the parents of non-Aboriginal children could be interviewed. Altogether 22 parents or guardians of 38 tested Aboriginal children, and 31 parents of 34 tested White children were seen. The proportionately larger number of Aboriginal children per guardian (or parent) is a result of their larger families.

5.4 HYPOTHESES

The broad propositions investigated in Part B of this inquiry are first that, as a result of sociological and historical forces (the nature of which are examined in Chapter 6), Aborigines on the Far South Coast of New South Wales have evolved subcultural characteristics that are similar to those described by Lewis as typifying members of a culture of poverty, and which have persisted, despite recent improvements in the living conditions of many Aborigines in the region; and second, that psychological competencies and predispositions required for scholastic success tend not to be fostered in this environment. But previous research suggests that a complex set of interactions may underlie such generalisations. Hence, subsumed under these broad propositions, and based on evidence in the literature reviewed in Part A of this work, are a set of 'mini-hypotheses' or expectations that were tested in the quantitative section of Part B. These are listed below.

- (1) The families of the Aboriginal children will have more characteristics in common with the culture of poverty than will the families of the low socio-economic White children sampled in the study.

i.e. The Aboriginal families will have significantly higher scores on the CPS scale.

- (2) As a consequence, the scholastic status of the Aboriginal children will be lower:

i.e. (a) Teacher ratings of the number and reading abilities of the Aboriginal children will be significantly less than for the White children;

(b) The children's scholastic status will be negatively related to their families' involvement in the culture of poverty (as assessed by the CPS).

- (3) As major characteristics of the culture of poverty are non-involvement in the institutions of the dominant society and non-identification with its goals, it is likely that children from families with higher CPS ratings will experience less pressure to attend school. They also are likely to experience greater disruption to schooling as a consequence of illness, family disruptions and so on.

Thus (a) The Aboriginal children will have higher absentee rates than the White children;

(b) Absenteeism will be associated positively with involvement in the culture of poverty; and

(c) It will be negatively related to scholastic status.

- (4) In accordance with the conclusions reached in Chapter 3, it is hypothesised:

(a) that the language abilities of the Aboriginal children, as assessed by the VE, and their mastery of Standard English, as assessed by the PPVT and AA, will be less than for the White children;

(b) that performance of the children on the language tests will be negatively related to their families' CPS scores; and

(c) that there will be a positive association between each index of scholastic status and performance on each of the language scales.

- (5) In view of the long and continuous contact between the Aboriginal, and White, communities on the south coast, however, and in accordance with research reported in Chapter 2 which also compared relatively high-contact Aborigines with low-socioeconomic Europeans, it is improbable that the sociocultural variations between both groups will be sufficient to produce significant differences between them in their development of basic logical operations.

- Thus (a) There will be no difference between the Aboriginal and White children in levels of cognitive development as assessed by classificatory performance on the Nixon and I & P Matrices Tests;
- (b) There will be no relationship between children's classificatory performance and their families' CPS scores; and
- (c) Classificatory performance will, however, be positively related to scholastic status for each ethnic group.

- (6) As a consequence of their greater involvement in the culture of poverty and of the feelings of dependence it engenders:

- (a) The Aboriginal children will have a greater external locus-of-control orientation (as assessed by the CNS and PPNS) than the White children;
- (b) Children's externality will be positively associated with their families' CPS scores; and
- (c) In contrast, externality will be negatively associated with scholastic status.

The quantitative analysis extends beyond an investigation of these hypotheses, however, for, in addition to examining the inter-relationships between variables for both Aboriginal and White children, it explores trends for each variable according to age, sex, school, and ethnicity. A rationale for, and a description of, the inferential statistics selected for this study is included in Chapter 7.

5.5 THE SOCIOHISTORICAL DIMENSION

The second component of the study focused on gathering data for a sociohistorical analysis of the South Coast Aboriginal community. It represents a response to the need, noted earlier, for educators and psychologists to have more comprehensive knowledge of the sociocultural background to the emergence of competencies and predispositions in Aboriginal children. It also recognises the importance of considering 'macro' (Witkin and Berry, 1975; Cole and Bruner, 1971; Dasen, 1977), as well as 'micro' (Piaget, 1950; Skinner, 1938) environmental influences on the development of these competencies and predispositions, and their expression, or otherwise, as academic performance.

Consistent with the emphasis throughout this thesis, an historical perspective was adopted in an attempt, in this instance, to provide deeper insights into the nature, strength and persistence of the sociocultural traits exhibited by these children. Despite the recent growth of published material on Aboriginal history and social conditions, substantial gaps in our knowledge remain. Few regional histories of Aboriginal communities have been written and none on the Aborigines living on the South Coast.⁽¹⁾ Similarly, although some general histories (Rowley, 1970b; Docker, 1964) have referred to the development and persistence of poverty amongst Aborigines, and to their possession of a culture of poverty, none have attempted to trace systematically the development of this subculture, or to identify the dynamics underlying its emergence. Consequently, how much the subcultural characteristics of Aborigines are an adaptation to poverty, or some other circumstance, that is essentially a universal human

(1) Several reports have appeared subsequent to, and in conjunction with, this inquiry. See Castle and Hagan, 1976b, 1978, 1979.

response to such conditions, or how much these characteristics represent a response that is peculiar to Aborigines (perhaps reflecting the persistence of traditional patterns that have proved functional in the changed circumstances) remains unclear.

The present study is designed to help fill this gap by investigating the emergence of the sociocultural traits of South Coast Aborigines in the light both of their unique historical circumstances and of Lewis' concept of a culture of poverty. But it is beyond its scope to provide a definitive, or even an exhaustive social history of this group of Aborigines. Rather, it seeks to go beyond a brief quantitative indication of their current sociological situation, as is usual for studies of Aboriginal cognition and schooling, and to provide a more complete picture of the nature and development of their sociocultural characteristics. In the process, it seeks to provide a comprehensive overview and an interpretation of their social history in an attempt to shed light on the nature of the principles governing social change in culture contact situations. By so doing, insights may be gained not only into the nature of the sociocultural processes underlying the emergence of the subcultural traits of these Aborigines, but also into the likely level, direction and duration of future sociocultural changes they may experience. Thus the study provides a sound contextual framework for the quantitative analysis of the inter-relationships between cultural, cognitive and scholastic characteristics already referred to. Hence, it serves as an example of the practical application of an eclectic orientation to research in the field of Aboriginal education.

Included in the wide range of sources tapped in the study were old records of local organisations and families, diaries, newspaper files and recent government records. Archaeological,

ethnographic, demographic, economic, linguistic, and historical studies also were reviewed. Resource institutions visited included Bega Museum and Municipal Library, Wollongong Municipal and University Libraries, Sydney's Mitchell Library, the Australian Institute of Aboriginal Studies, and various government agencies in the district. As noted previously, large numbers of interviews with members of both the Aboriginal and European communities also were conducted.

In addition to parents of children taking part in the quantitative section of the inquiry, those interviewed included most of the prominent members, and a sample of young and old members of the Aboriginal community; and representatives of the European community who had regular dealings with Aborigines in the area, such as employers, social workers, employment officers and policemen, as well as some who had little contact with Aborigines, such as garage proprietors. Information sought from Aboriginal interviewees concerned personal experiences, expectations and feelings of identity. Employment and residential histories of each individual and comprehensive personal histories of some older Aboriginal residents in the area also were obtained. Interviews with Europeans were directed towards discovering attitudes about Aborigines, the nature of problems Aborigines tend to experience, assistance available to and utilised by Aborigines, and the employment conditions of Aborigines. Information so obtained was checked where possible across interviews and with data from other sources.

Like the parental interviews, these interviews were conducted under a wide variety of circumstances. Some occurred in people's lounge rooms, some on farms, others in hotels and still others in a variety of other situations. A large number of interviews were

informal, but, as already noted (5.4.8), many were semi-structured. A tape recorder was used only occasionally during the interviews, as it was both inconvenient in many situations and was found to be intimidating to some interviewees. Most information obtained from the interviews was recorded in a diary immediately following the interview.⁽¹⁾ This was found to be both an effective and a convenient means of recording the information. As not all the interviewing could be undertaken at the same time, several visits to the area were occasioned over a period ranging from 1974 to 1977. More than forty Aborigines and thirty Whites were interviewed during this period.

5.6 CONCLUSION

The methods used in this interdisciplinary inquiry thus varied greatly. On the one hand, precise, accurate, measurable units of information were required for a quantitative study of the relationships between variables; on the other, both 'hard' (for example, government records) and 'soft' (recollections by individuals) sources of information were tapped, coalesced and interpreted in an attempt to build a coherent picture of past events, their causes and their consequences for Aborigines. The line between objectivity and subjectivity with regard both to the nature of the evidence and its interpretation in the historical component of this study, therefore, is less easily drawn than for the quantitative component (which, as noted in Chapters 2 and 3, also cannot be entirely free from bias). But as the subjective experience of being Aboriginal on the South Coast represents an important area of inquiry for the study, subjective interpretations of past events and current attitudes by the individuals involved

(1) This does not include the administration of the CPS, which was recorded during the interview.

represent a valid, and, in some instances, the only source of available information. Nevertheless, the element of subjectivity in the interpretation of such evidence was reduced by cross-checking sources and focusing on the congruency between the information obtained from individual sources and general patterns that began to emerge.

We now pass on to a presentation of the research findings. The historical outline of the emergence of South Coast Aboriginal subculture and an interpretation of the sociocultural processes underlying its emergence are presented in the following Chapter (Chapter 6). The quantitative findings are reported in Chapter 7, and are discussed in Chapter 8.

CHAPTER 6

SOCIOCULTURAL ASSIMILATION AND ACCOMMODATION ON THE FAR SOUTH COAST OF NEW SOUTH WALES

6.1 INTRODUCTION

Although Oscar Lewis stresses the persistence over generations and basic uniformity across regional and national boundaries of the culture of poverty, he also implies that it has a dynamic quality by emphasising its functionality and sensitivity to varying national contexts. Perhaps, therefore, the culture of poverty is best conceived as an ongoing process of adaptation by dispossessed groups to the imposition of a Western capitalistic economic system. But, although old ways and habits of the indigenous groups may no longer persist in their original form, the psychological needs that gave rise to them remain, and their presence is likely to have influenced the emergence and nature of succeeding habits and ways of life of these people.

It is insufficient, therefore, to assume that, following the collision between European and tribal Aboriginal cultures on the South Coast of New South Wales, the latter culture simply vanished without trace. Just as elements of the genetic pool of its people have survived, so cultural elements also may have survived. These elements, in combination with a continuous inflow of cultural ingredients derived from, or developed in response to, the Australian variation of a capitalistic economic, social and political system, therefore, are likely to form the basis of a distinctive Aboriginal version of the subculture of poverty.

Consequently, before attempting to outline the emergence of the part-Aboriginal subculture on the South Coast by looking at forces shaping its development from European sources, it is important to look at the tribal culture from which it may have partly derived. Not only will such an examination enable a fuller appreciation of the nature and degree of change which people of Aboriginal descent were forced to

undergo following European settlement, but it also may provide insights both into the nature of the cultural mechanisms underlying this change, and into the nature of traditional cultural characteristics that have facilitated adaptation to the changed circumstances, and which, therefore, are likely to have persisted.

A more complete understanding of the 'mechanics of innovation' within society, Mulvaney (1971) suggests, would shed light on the dynamic nature and adaptability of traditional Aboriginal culture. It also may furnish insights into the nature of the Aboriginal response to European-caused innovations and changes, and the subsequent emergence of the Aboriginal version of the subculture of poverty. Mulvaney argues that the spread of new ideas may be dependent on their utility and compatibility with existing cultural frameworks. Local inventions or cultural variations, he suggests, reflect particular "functional, ecological or cultural preferences or adaptations" (1971, p.377).

His view parallels to some extent the Piagetian concepts of assimilation and accommodation in intellectual development. Thus, somewhat like a child developing cognitive structures, a cultural group can be conceptualised as adapting to new circumstances by attempting initially to assimilate only environmental input that is compatible with existing sociocultural structures and needs. If these structures are incapable of overcoming sociocultural disequilibrium caused by the new pressure bearing upon them, however, they, like a child's cognitive structures, may be modified, disbanded or added to in a process of cultural (as opposed to psychological) accommodation. As well as providing insights into the nature of culture change, this conceptual approach emphasises the human (and hence, the psycho-biological) constraints under which such change operates. Thus it provides a valuable theoretical framework for interpreting the social history of

South Coast Aborigines and is discussed more fully later in the Chapter.

6.2 PREHISTORY

The need to adapt to changed circumstances is not new to Aborigines. Man first arrived on the South Coast of New South Wales at least 20,000 years ago (Lampert, 1971). If evidence suggesting human occupation of Keilor, Victoria, 40,000 years ago can be taken as a guide, his residence in south-eastern Australia may have been for a substantially longer period (Mulvaney, 1975). During this time, substantial variations in landforms, climate, fauna and flora have forced him to undergo considerable readjustments and adaptations.

It is possible that Aborigines evolved from *homo erectus* in Australia, but, as indicated in Chapter 1, the weight of archaeological and geomorphological evidence suggests that their ancestors arrived from south-east Asia at least as early as 30,000 to 40,000 years ago, and possibly as early as the second last Ice Age, 45,000 to 60,000 years ago (Mulvaney, 1975). Genetic evidence suggests a fairly close ancestral relationship between Aborigines and the peoples of New Guinea (Kirk, 1971). At the time of the initial European settlement in Australia, however, Aborigines shared greater physical similarities with each other than with other groups. Nevertheless, they were not a homogeneous population, but a "genetically heterogeneous collection of populations" (Kirk, 1971, p.341). Controversy continues as to whether this heterogeneity was the product of local evolutionary changes or successive migrations of different peoples. South Coast Aborigines, for example, are usually classified as Murrayians, a group thought to have different origins from Tasmanians and Carpentarians (Birdsell,

1949, 1967). But Thorne (1971) reports substantial similarities in the skeletal make-up of Murrayians and Tasmanians, thus indicating a greater affinity between them than was previously thought. Tindale (1974), on the other hand, suggests that a small group of South Coast people (the Bidawal Tribe) had negroid characteristics in common with Tasmanians and Barrineans (a north Queensland group), but different from Murrayians.

Giant marsupials, large reptiles and flightless birds, all now extinct, may have shared the continent with man during his early period of occupation. They included three-metre high, heavily built short-nosed kangaroos (*Procoptodon Goliath*), quadrupeds like the rhinoceros-sized *Diprotodon Optatum* (Calaby, 1971), the bullock-sized *Nototherium*, and the donkey-sized wombat, *Phascolonus*, flightless birds *Genyornis* and *Dromornis*, the size of moas (Mulvaney, 1975) and varanid lizards that were about five metres long (Calaby, 1971). The numbers of these animals surviving to man's arrival, their distribution (including whether or not they lived in coastal areas), and the role they may have played in man's lifestyle have yet to be determined, but there is some suggestion that he may have hunted some, if not all, of them. How much their extinction is due to climatic factors or to the actions of man, particularly his uncontrolled use of fire, similarly is unclear (Calaby, 1971). Their passing, however, may have caused man to undergo considerable readjustments.

Cyclical fluctuations in periods of glaciation have been particularly instrumental in causing changes to man's physical environment through his long period of habitation in Australia. During the last Ice Age, extending from approximately 28,000 to 5,000 years ago,⁽¹⁾

(1) Costin (1971) suggests the cold period in south-eastern Australia began about 32,000 years ago with only slight amelioration until 10,000 years ago.

the sea at its lowest point (between 20,000 and 18,000 years ago) dropped to over 150 metres below current levels and did not rise to its present state until between 6,500 and 3,600 years ago (Mulvaney, 1975). Consequently, many early South Coast sites of occupation, at present underwater about 16 kilometres from the shoreline, had to be abandoned.⁽¹⁾ Severe conditions prevailed on the adjacent Monaro Tablelands, where temperatures during this period averaged 8.3°C to 11°C below those of today, and the climate at 610 metres (the level of Canberra) was similar to that of Mount Kosciusko today. Although fluctuating slightly, a trend towards warmer temperatures for the last 10,000 years has been discernible. Inferences concerning subsequent evaporation and weather patterns remain controversial, but according to Costin (1971), analyses of vegetation and soil samples suggest that conditions on the South Coast have changed little during this period.⁽²⁾

Like the environment, Aboriginal culture did not remain static. Regional adaptations to varying ecological zones and the diffusion of ideas, technology, practices and goods through trade and cultural exchange led to a continuous process of change. This process was limited, however, both by the rate at which diffusion could occur in a society where all transport was by foot, and by the isolation and relative cultural homogeneity of Aboriginal groups generally when contrasted with peoples elsewhere. Nevertheless, as Mulvaney (1971) points out, earlier notions that Aboriginal society was, and would remain static, mired in the conservatism of the elders and their resistance to change, were misleading.

(1) South Coast Aboriginal legends also refer to an invasion of the land by the sea (see p.280).

(2) He does note, however, that a slightly colder period may have occurred from approximately 4,000 to 3,000 years ago to about 1,500 years ago.

Several cultural sequences have been identified in the prehistory of Aborigines living on the South Coast. Lampert (1971), for example, has identified three overlapping phases in the use of stone materials. The earliest (pre-Bondaian), which lasted from about 20,000 to 5,500 years ago, is characterised by simple pebble tools, scrapers made by flaking rocks, and the cores from which the scrapers were struck. The second phase (Bondaian), which extended from about 5,500 to 500 years ago, is represented by the comparatively sophisticated stonework of a 'backed blade industry' in which ground edges of geometric microliths and 'pressure trimmed' bondi points predominate. During the third phase (post-Bondaian), which lasted until European settlement, larger eloueras and fabricators began to appear, but the use of stone tools began to decline to such an extent, as organic materials began to replace them, that Mulvaney (1975) has suggested the term 'Stone Age' is inappropriate to describe accurately the level of technology of Aborigines at this time.

Variations in the content and style of artwork and in the materials used to produce it also indicate varying cultural periods. Elkin (1974), for example, notes that four phases in artistic development have been described to account for sequential variations in artwork "in the cave and rock shelter galleries" of coastal New South Wales.... "In the first, the designs were produced by stencilling together with some outline and silhouette drawings. In the next, human and animal subjects were painted in red and/or black, and in the third phase in black and/or white. Finally there was a polychrome phase, in which an elaborate culture hero figure appears" (p.15). The specific number, nature, sequence and significance of varying periods of artwork have yet to be agreed upon, however; and more work is required before their precise relationship to other archaeological finds in the region

can be determined and before the relationships between geographically separate groups can be established. Nevertheless, a continuous, albeit slow, process of culture change is evident prior to European contact.

6.3 TRIBAL CULTURE AT THE TIME OF EUROPEAN CONTACT

By the time Europeans arrived, Aborigines on the South Coast had evolved a complex culture in which their mythological past coalesced with economic realities to bind them into an intimate relationship with nature. Unlike the 'barrio' or slum cultures described by Lewis, this culture was marked by considerable internal organisation and tight integration within a broader social, spiritual and geographic matrix. As Schapper (1970, p.3) notes, the:

... man-nature relationship was reflected in their social organisation and determined almost every aspect of their culture. Their way of life was an integrated, internally consistent whole. There was complementarity within and between the social structure, law and order, family function, subsistence activities, code of behaviour, mythology and ceremonial and ritualistic activities.

This intimacy between man and nature contrasted sharply with pre-Darwinian European emphases on the distinction between 'god-like' civilised man and 'brutish' nature. It was an outcome of economic circumstances which demanded that the Aborigines receive their biological sustenance from their surrounding environment. Seafood, in particular, was important to coastal Aborigines whose skills and technology were attuned to its acquisition (Lampert, 1971). Men caught fish by hurling multi-pronged wooden spears tipped with bone, from bark canoes. (1) Women used fishing lines with crescentic shaped shells as

(1) This skill was to prove useful in later years when the Aborigines were employed as harpooners on European whaling ships (see 6.4).

hooks or made fish traps in lagoons (Lawrence, 1971). Although some doubt exists, it is likely that 'specialised seashore subsistence' formed only part of a wider repertoire of occupations related to the acquisition of food. In addition to gathering edible plants, these coastal groups probably also hunted land mammals, using techniques similar to those of their neighbours farther inland (Lampert, 1971). Lawrence (1971) supports this view and points out that when fish were plentiful during the warmer season, coastal Aborigines tended to congregate in substantial numbers along the seashore, but they dispersed, either inland or to various other coastal sites in smaller groups, during the colder part of the year.

Although this kind of economy encouraged a lifestyle that was less nomadic than the way of life of interior peoples, it was still only semi-sedentary. Consequently, no advantage would be gained in building permanent dwellings or in acquiring numerous possessions. Accordingly, the technology of coastal Aborigines, like that of the other groups, was characterised by "simplicity, portability and improvisation of local materials" (Mulvaney, 1975, p.88). Nevertheless, they utilised a surprisingly large number of implements and weapons and, as Blainey (1975) suggests, because of the fruitfulness of their marine environment, they even may have been better off materially than European peasants at the time of Cook's voyage.

Lawrence (1971) notes, for example, that Sydney Aborigines (who had many similarities with South Coast groups):

... used canoes, spears, fish hooks, log traps, fish poisons, and possibly nets in fishing. They also possessed spears, spear-throwers, clubs, boomerangs, wooden swords, parrying sticks and shields, digging sticks, hafted and unhafted stone axes, shell scrapers, net bags, folded bark troughs, palm swathe baskets, wooden and bark dishes. The hunting devices employed included pitfalls, brush fences, brush fence traps and food decoys (p.257).

In addition, South Coast Aborigines owned canoe paddles, throwing sticks, fire sticks, possum-skin rugs with associated needles,⁽¹⁾ threads and fasteners, bone ornamentations and engraving tools, string made from plant fibres, animal hair or sinews, feathered ornamentation and brushes and various magical objects contained in a special bag, often made of human hair (Massola, 1971; Howitt, 1904). Shelters were temporary windbreaks called '*mia mias*', or more permanent sapling dwellings called '*gunyahs*' (Massola, 1971). With the exception of a few materials obtained through limited trade with other groups, most of these belongings reflected the Aborigines' dependence on, and intimate knowledge of, their immediate physical environment.

Such an economy had no place for an elaborate social hierarchy. Totemism and exogamy formed the basis of social organisation. Children inherited the totem of their fathers. Unlike other groups with female descent, whose totemic relationships became dispersed as wives went to live with other groups, therefore, individuals sharing the same totem on the South Coast tended to be localised. In addition, although cared for by women until their initiation, children were considered to belong to the men. At their initiation, males⁽²⁾ acquired a personal totem with special magical qualities. Males and females also had their respective sex totems; for males it was the bat or the emu-wren, and for females it was the tree creeper. Ordinarily an individual could not eat the plant or animal with which he had a totemic relationship (Howitt, 1904).

(1) Wright (1979) suggests, however, that South Coast groups did not make possum-skin rugs but obtained them from other groups through trade.

(2) The situation for females is unclear.

Unlike the class systems of other tribal groups, the marriage-regulating mechanisms of the South Coast people were based on the concept of a 'toar' relationship. The elder men of one or several tribes, who had the required knowledge of kinship relationships, would meet and select one or more young married women with the appropriate kinship credentials to become 'toar' to a given unmarried male. This meant that the woman's daughter was to become the man's wife. In return, as he also was 'toar' to her, his sister was to become the wife of her son. Once the 'toar' relationship was set up, strict prohibitions on the interactions between the two individuals involved came into force. For example, they could not talk to, or even look at, each other (Matthews, 1900a, 1900b).

A strong integrating force in South Coast Aboriginal society was its underlying animistic philosophy, according to which "all that part of the world which was of interest or significance to man is explained by the existence of distinct spirits" (Elkin, 1974, p.221). These spirits were thought to possess magical qualities which gave them power over life and death and the formation of natural features.

Of special importance to South Coast people was Daramulan (or Biambin), a supernatural being who acted as a guardian over man's behaviour from his abode in the solid vault that was the sky. His actions throughout the Dreamtime legitimised the social organisation, code of behaviour and ritual activities of the South Coast people. According to their legends, the earth was originally barren and rocky, and extended far beyond the present shoreline. Daramulan then placed trees over the land and provided man with his ancestry, ethics and ceremonies. Through his actions and powers and those of other spirits, animate and many inanimate objects were thus bound together in a

common mythological heritage and spiritual affinity. Man, much of nature, and the laws that governed them, were thus conceived by Aborigines as forming varying and interrelated manifestations of the same eternal supernatural world. A man's death was thought to occur when his spirit in the form of his shadow left his body and went to Daramulan, who looked after it. Thunder and the sound of a bull roarer were thought to represent Daramulan's voice (Howitt, 1904).

Although South Coast Aborigines developed variations of myths specifically attuned to their own ecocultural and psychological needs, the essence of their beliefs was shared with other Aboriginal groups. Their teachings concerning Daramulan, for example, differed only in terminology and details from the teachings of other Aboriginal groups through south-eastern Australia (Howitt, 1904). Similarly they, like other Aboriginal groups, attributed qualities of 'goodness' to some spirits and 'badness' to others. Malevolent spirits that sometimes took the form of monsters, such as Yaroma, a hairy-bodied, short-legged creature with big feet that moved about by jumping, and swallowed men whole; or Mumuga, a creature that lived in caves and overwhelmed its victims by the pungent odour of its excrescence which it exuded when chasing them, could make life precarious for the wayward or careless Aborigine. Other spirits were beneficial. Dyillagamberra, for example, a spirit believed to inhabit the upper reaches of the Tuross River, was given credit for creating various watering holes along its course and could be prevailed upon to bring rain in times of drought (Matthews, 1907). Non-adherence to tribal law or ritualistic practices; or failure to take appropriate magical precautions, left one open to harm from the malevolent variety.

Knowledge of such supernatural beings and their powers and deeds was passed on from one generation to the next through a rich and varied ritualistic and ceremonial life that made use of mime, dance, song, story-telling and artwork. However, not all knowledge was shared equally among members of a community. Strict sexual divisions often accompanied its acquisition. The most important Dreamtime occurrences, for example, were revealed only to initiated men. When learning these secrets, initiates were forced to undergo considerable psychological and physical stress, including tooth avulsion and hair depilation.⁽¹⁾ The emotional intensity they experienced helped to impress upon them the importance of what they were learning and taught them to respect both tribal law and the authority of the elders and, more particularly, of the Gommeras who taught them. Daramulan's correct name, his activities and his importance, for example, were known only to the initiated men. Similarly, it was only they who knew of the existence of the bull roarer and that the noise it made was the voice of Daramulan. Little is known of the spheres of knowledge and ceremonial activities of the women of these tribes.

Not surprisingly, life with the various supernatural beings was not always easy for the coastal Aborigines and they often required magical assistance. Ritual ceremonies, magical charms and medicine men, or 'Gommeras', all were utilised to counter the effects of evil spirits and to enlist the support of benevolent ones in all important undertakings. A complex array of ceremonial practices that accompanied the preparation and execution of a revenge expedition, for example, has been described by Matthews (1904). Ritualistic dancing and chanting,

(1) Nose flattening, the insertion of a bone through the nasal septum, and scarring of the skin also were practised.

tree ceremonies, some hair from the corpse of the wronged deceased and body decorations were only some of the necessary ingredients for a successful expedition. Human fat was believed to be an especially powerful magical aid and was rubbed on spears to increase their accuracy, and on fishing lines to ensure a good catch. It was procured by Gommeras known as 'Bukin', and was thought to be obtained either by magic alone, or by violence accompanied by magic. The donor did not always survive. Another magical aid was the preserved hand of a deceased relative. Worn around the neck or under the arm, it was believed to tap its wearer to warn him of danger (Howitt, 1904).

Clearly the lifestyle led by South Coast Aborigines was not idyllic in the sense that it was free from violence, suffering or hunger. In addition to the supernatural dangers mentioned above, there were natural ones. Population was limited by the resources available. Infanticide was practised, forms of cannibalism occurred, and clashes between men and women using wooden clubs were reported by several Europeans. Payback killings and violent punishment, including death, for transgressing tribal laws and traditions were not uncommon.

But the individual experienced a cultural cohesiveness and wholeness which provided him with a secure identity. He knew exactly where he stood in relationship to others and to the natural universe. He had a sense of belonging, not experienced by members of a culture of poverty, that gave meaning and a strong sense of purpose to his life. He also is likely to have experienced an emotional intensity and fullness that contrasts sharply with the alienation and emptiness felt by many, both black and white, in contemporary Australian society.

The two tribes that occupied most of the area covered in this inquiry are known now as the Djiringanj and Thaua. Their territories corresponded approximately to the present⁽¹⁾ boundaries of Mumbulla and Imlay Shires respectively (see map, Figure 6.1). Although such tribal groupings are likely to be more an artefact of the need for a classificatory system by contemporary Australians than of the Aborigines' sense of group identity (which, as has been noted, was based primarily on their totemic relationships), some sense of shared kinship, tradition and territory appears to have accompanied the common language spoken by each group (Tindale, 1974).

They also obtained wives, exchanged goods and shared ceremonies, ritual practices, beliefs and feasts⁽²⁾ with the Ngarigo of the Monaro Tablelands to the west and the Walbanga and Wandandian inhabiting the coastal plains to the Shoalhaven River in the north. Contact with the Gippsland tribes to the south appears to have been less extensive. The Bidawal, a group inhabiting thick bushland in between the Thaua and Krauatungulung, a Gippsland tribe, had cultural similarities with both groups and with the Ngarigo as well. Altogether about one thousand Aborigines are likely to have been inhabiting the area immediately prior to European arrival in eastern Australia.⁽³⁾

(1) i.e. prior to their amalgamation with each other and with the municipality of Bega in 1980.

(2) On the coast, these included stranded whales (Lawrence, 1968) and, inland, centred on the bogong moth (Flood, 1981).

(3) This figure includes the Djiringanj, Thaua and some Bidawal, and is based on Tindale's (1974) estimate of tribal groups as averaging between 400 and 500 individuals.

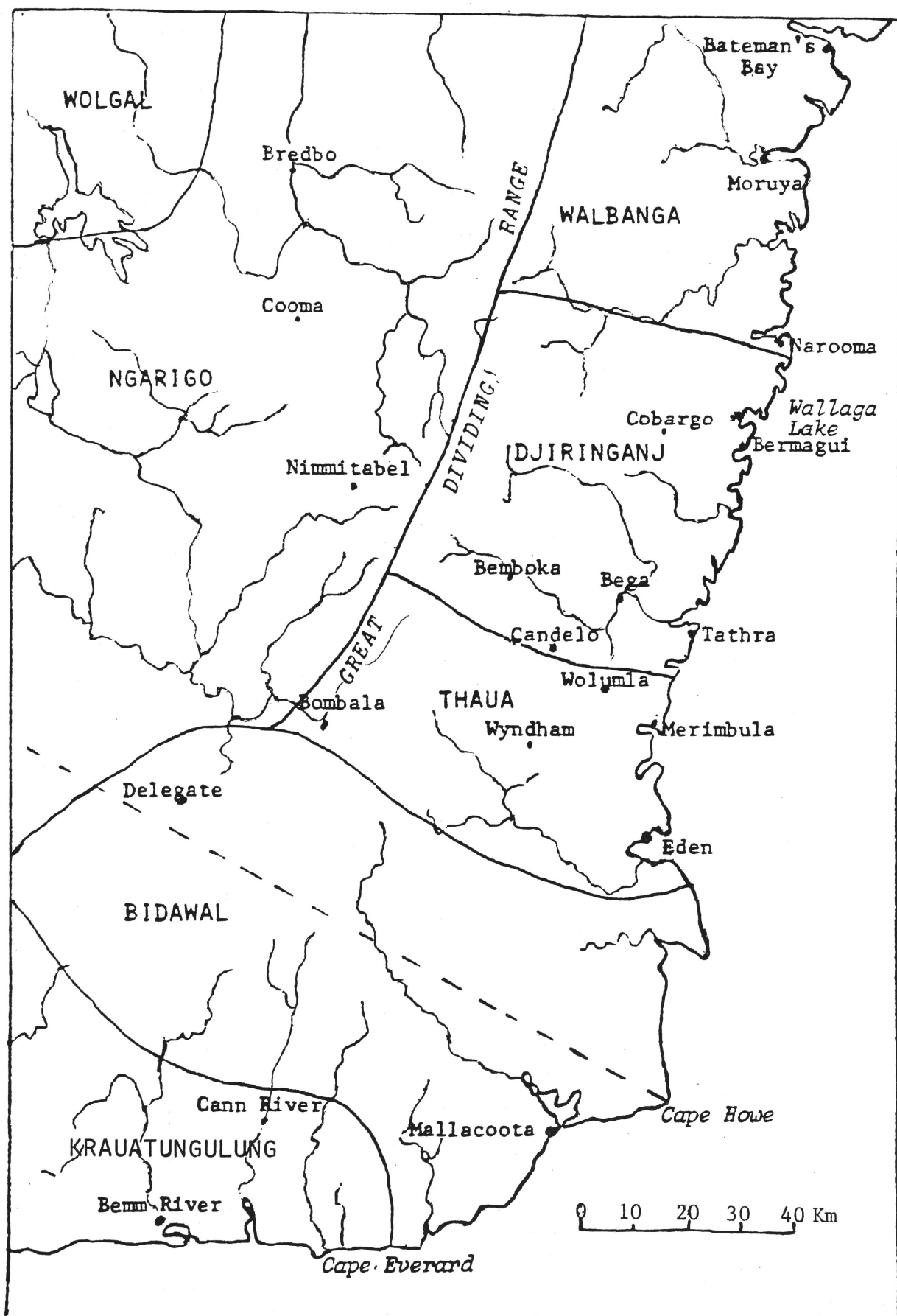


Figure 6.1: South Coast Aboriginal tribes
(Source: Tindale, 1974)

6.4 DISPERSION AND DEPOPULATION (1829-1860s)

However, even before White occupation of their territory commenced, the Djiringanj and perhaps the Thaua already may have been declining in numbers. Squatters had been moving into the adjacent Monaro Tablelands throughout the 1820s. The pressure they exerted on local tribes appears in turn to have increased the pressure these tribes exerted on surrounding groups, thereby disrupting traditional relations and increasing tribal warfare. W.D. Tarlington is thought to have witnessed an example of such warfare early in 1829 when pioneering⁽¹⁾ a cattle route from Braidwood in the Tablelands to the coastal plains near present-day Cobargo and Bermagui. Unspecified Monaro groups appear to have been victorious over sections of the Djiringanj in a fight which left sixty dead (Bayley, 1946). The ill-feeling generated by such fighting appears to have persisted for some time. Subsequent clashes also were reported (Robinson, 1844) and one of these has become part of the folklore of Aborigines at Wallaga Lake (Hercus, 1969; Sykes, 1977).⁽²⁾

Relations between the squatters who followed Tarlington into the district from the end of 1829 and its original occupants appear to have been more harmonious than was the case elsewhere in the colony of New South Wales throughout the 1830s and 1840s. Some early clashes did occur; at least one White hut keeper was killed and some stations were forced to close (Bayley, 1942). But reports of massacres of

(1) Although Tarlington is usually credited with having 'discovered' this route, he, like so many other White 'discoverers' in Australia probably was shown the route by his Aboriginal companions.

(2) According to this legend, the coastal Aborigines, led by 'King Merriman' were victorious against superior odds. An account of a battle similar to this one also has been recorded for the Gippsland tribes (Howitt, 1904).

Aborigines by Whites on the scale that occurred in other squatting areas through the period (Reece, 1974) are rare.⁽¹⁾ Indeed, most early chroniclers commented on the good relations between both ethnic groups. The Aborigines, particularly those on the coast, were described as industrious and generally were well thought of and well treated by the Europeans⁽²⁾ (Lambie, 1848; Robinson, 1844). Many were employed casually as farm hands⁽³⁾ - a form of employment that was to characterise them and their descendents until recently.

However, squatters were not the first Whites to be seen by Aborigines in the area. No record exists of what the inhabitants of the region thought of the Endeavour as it made its way up the coast in January of 1770, but few are likely to have guessed what it portended. It was not long before more ships like Cook's began to appear from over the horizon;⁽⁴⁾ and in 1797 Indian and European survivors of a wrecked longboat⁽⁵⁾ from the 'Sydney Cove' that had been grounded in the Furneaux Islands, passed through their territory. Towards the end of that year, and early the following year, a small whaling boat under the command of George Bass, also nosed its way in and out of bays and inlets along the coast on a voyage of discovery (Bass, 1797).

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- (1) This does not mean they did not occur. One Aboriginal informant claimed he knew the whereabouts of skeletons from such an incident (Interview 7.2) and the number of murders by Whites that were falsely recorded as outcomes of Aboriginal feuding may never be known.
 - (2) On at least two occasions during the early squatting period, Aborigines in the region risked their own lives to save Whites from drowning, once from a shipwreck (Robinson, 1844), and once from floods (Sydney Morning Herald, May 29, 1851).
 - (3) They worked as shepherds, stockkeepers, bullock drawers and at hoeing and reaping maize, and periodically as guides.
 - (4) These included several French exploratory expeditions (Marchant, 1969).
 - (5) The longboat was wrecked at Point Hicks, in present-day Victoria. Of the seventeen crew members who attempted to walk along the coast to Port Jackson, only four survived. Some of the Aborigines they met were helpful, others were hostile (Clark, 1797).

In subsequent years, other shipwreck survivors, some escaped convicts and members of government-backed exploratory missions, also came into contact (often hostile) with the local Aborigines (Wellings, 1965). But whalers and sealers were the first Whites to establish themselves permanently in the area.

Whaling had commenced in Australian waters shortly after the establishment by Governor Phillip of the settlement at Port Jackson; along with wool production, it rapidly became a mainstay of the colonial economy (Blainey, 1966). Some whaling ships may have anchored at Twofold Bay for rest or provisions from the late 1790s,⁽¹⁾ but it was not until 1828 that a more permanent base was established in the area by John Raines. He was soon followed by the Imlay brothers who, in 1832, also acquired vast squattages in the area from Governor Bourke. By 1841 they were employing three Aboriginal whaleboat crews, each with six men (Lambie, 1842). A similar number were employed by Benjamin Boyd in 1844 (Robinson, 1844). The strength, skills, dangers, courage and rewards of the Twofold Bay whalers have been captured by Mead (1961) in his book, Killers of Eden.⁽²⁾

In many ways, whaling provided an ideal meeting point for Whites and coastal Aborigines. Its seasonal nature complemented the seasonal rhythm of traditional Aboriginal lifestyles. The skills

(1) Little is known of the nature of the contacts between South Coast Aborigines and whalers prior to 1828, but some evidence suggests strongly that violence against Aborigines was practised by the members of at least one whaling vessel (Wellings, 1965).

(2) 'Killers' in this instance refers to the killer whales that assisted the whalers in capturing larger species.

it required were traditional skills; spotting and harpooning were the Aborigines' specialties (Robinson, 1844). For the Whites, there was the availability of skilled labour and the potential for substantial profits. By its nature, the work placed Aborigines and Whites on an equal footing. It was dangerous and required mutual co-operation, dependence and respect. There was no room for a master-servant relationship. The wages and conditions received by both Aborigines and Whites were identical (Lambie, 1842). Medical treatment, administered by the Imlays, also was available for both groups. In the off-season (during the summer months) the Aborigines abandoned the huts and lifestyle they had shared with the White whalers and returned to life in the bush with their kin (Lambie, 1842).

But such apparent advantages were superficial only. The changes required of traditional Aboriginal culture to adapt successfully to the European presence were vast and time was limited. As control of the land passed into the hands of the newcomers, the Aborigines lost their autonomy. The impact of this loss on their traditional culture was traumatic, destructive and irreversible. Detribalisation occurred rapidly as kinship groups were forced to move from their ancestral territory. Former enemies, and groups previously unknown to each other, were brought into close and not always friendly contact. Europeans flaunted traditional sanctions and taboos with impunity. Their cattle trampled over sacred places. No longer could the Aborigines hunt whenever, wherever or whatever their traditions allowed. Progressively the authority of elders and Gommeras and the certainty of tradition and custom were undermined. Traditional beliefs as manifest in Dreamtime stories - the heart of tribal Aboriginal culture - no longer were accepted by many as absolute truths.

The squatting and whaling period also ushered in a rapid decline in the numbers of Aboriginal full-bloods. The death penalty for transgressing tribal laws, and 'payback killings' in the form of tribal warfare accounted for some deaths; but the major killers were the viruses and bacteria which the Europeans introduced to the region, along with their cattle, sheep and horses. It is a sad irony that, while some Europeans were disdainful of Aborigines for their 'filth' and 'stench' (Reece, 1974), Aborigines were dying as a consequence of their physical contact with Europeans. By the 1840s, syphilis, influenza, smallpox and numerous other afflictions were ravaging the Aboriginal population (Robinson, 1844). Widespread over-consumption of alcohol and possible dietary deficiencies aggravated the situation. The European advance throughout south-eastern Australia had been too rapid. The full-blood Aborigines were too few in number and had insufficient time to adapt biologically or socioculturally to their presence. Within a generation of the initial European occupation of their lands, few remained alive.⁽¹⁾

In their wake, there arose a population that was predominantly of mixed Aboriginal and European ancestry. The overwhelming masculinity of the European population in the colony (Willey, 1978) and the Aboriginal practice of cementing social relations through sexual relations (Elkin, 1974), ensured the early development of such a group. The first White child was born in the Bega district in 1841 (Bayley, 1942), but by this time, several part-Aboriginal children already were likely to have been living in the area. Robinson (1844) counted eight at Twofold Bay and noted others at Bega in 1844. Genetically, these

(1) As we shall see (6.9), however, enough survived to ensure some elements of continuity between the traditional culture of the region and its subcultural successor.

children were better-equipped than full-blood children to survive the introduced diseases. Together with similar individuals from elsewhere, they comprise the ancestral nucleus of the contemporary part-Aboriginal population on the Far South Coast and of an unknown number of 'Whites' living there.

Their biological advantage over the full-bloods also gave them more time in which to adapt socioculturally. Although the European component of their ancestry did not gain them acceptance into White society, it tied them less tightly to the constraints of tribal Aboriginal culture. They were not the product of traditional marriage patterns and hence did not fit easily into the patrilineally inherited totemic organisation of tribal Aboriginal society. As a result, and as few of their White fathers were prepared to take responsibility for them, many were probably killed at birth or shortly thereafter.⁽¹⁾ But others survived and it was the Aboriginal community, not the White community, which took immediate responsibility for most of them and with whom most were to become identified. The socialisation influences to which they were exposed, however, were different from those of their full-blood predecessors. A new subculture, in which their mothers played a prominent role, was being forged. In common with the subculture of poverty described by Oscar Lewis, it represented a blueprint for survival for the victims of European colonialism, and the accompanying destruction of indigenous cultures.

(1) Although reports of infanticide on the Far South Coast are scarce, the practice was common in many areas at the time, and was reported as occurring in adjacent regions (for example, Monaro - Robinson, 1844; Gippsland - Barwick, 1971).

6.5 GYPSY PAUPERS (1860s-1890s)

These new survival patterns became entrenched from the 1860s to the 1890s as the White presence was consolidated. The squatters and whalers were only the vanguard of an expanding European civilisation. Their dealings with the Aborigines had been on a person-to-person basis, and both groups had to contend with the physical elements on close-to-equal terms. There was an immediacy in their relationship with each other and an intimacy they both shared with the land. But, as the infrastructure of European civilisation was strengthened with the development of towns and their accompanying institutions and organisations, the distance between the full-blood Aborigines and their mixed-blood descendants on the one hand, and mainstream White Australian society on the other also grew. Progressively the Aborigines became peripheral to the new order - forgotten for the most part, except when they served as unwanted reminders of the human cost of European expansion, or as figures of fun. By the 1890s they had already formed a class of pauper gypsies which George Thornton, the first New South Wales Protector of Aborigines, hoped to prevent (Thornton, 1882).

Bega had been inaugurated as a township in 1851 and Eden as early as 1838. Boydtown had already experienced its boom and bust by 1849. But it was the discovery of gold at Kiandra in 1860 and the passing of the Free Selection Act in 1861 that ushered in a new era for the South Coast. The non-Aboriginal population of the district rose quickly as smaller farms began to replace the vast squattages of the earlier years and as the towns grew. As the increasing demand for goods and services generated by this population growth became satisfied, the web of the new civilisation thickened.

The imposition of European law and order was strengthened with the establishment of a Court of Petty Sessions and the appointment of police constables at Eden in the late 1840s and Bega in the late 1850s. Ideological underpinnings of the new order were reinforced with the introduction of a school and churches at Bega throughout the late 1850s and 1860s. Although the region was to remain somewhat isolated until the early 1960s, when sealed roads and bridges finally connected it with Sydney, improvements in transport and communication strengthened contacts with the outside world with the inauguration of a regular steamship service to wharves at Merimbula and Tathra, the establishment of a telegraph at Bega, and the commencement of local newspapers during the 1860s. The money economy was strengthened when money orders, issued by the Post Office, superseded bartering arrangements and cheques from the local auctioneer and real estate agent, and when a local bank agency was opened, also during the 1860s. Although never especially strong, secondary industry in the form of flour milling and later brick making also was evident in the region (Bayley, 1942).

For the Aborigines, this increasing complexity meant greater alienation. Their skills and experience did not enable them to profit from the changing economy. Used to dealing with others on an individual basis, and lacking a tradition of hierarchical social organisation, they were unequipped for the intricacies and impersonal authority of the new order. Unfamiliar with the procedures and purpose of organised self-interest groups, as they function in complex democratic societies, they were unable to take advantage of them. Progressively they became dependent, disadvantaged and demoralised individuals, relying when necessary on each other for emotional and material support, or on the benevolence of White individuals or agencies.

Their situation was made more difficult because of the capitalist ideological underpinnings of Australian society. Unlike minority groups in contemporary communist states, such as the Union of Soviet Socialist Republics or the Peoples' Republic of China, they had no ready-made ideological slot which enabled them to identify positively with the dominant society and which could have made their adaptation to it less traumatic. The psychological comfort of having an unquestioned and valued role in the natural and social order which had characterised their ancestors was absent. In addition, as indicated in Chapter 4 (4.4), not imbued with the work ethic, nor with the desire to accumulate wealth or power, and being neither future- nor achievement-orientated, they did not share the same motivations as the Whites. Consequently, they were unprepared for the manipulations and machinations that characterise much of European behaviour and were unable to take advantage of European traditions of entrepreneurship, upward social mobility, competitiveness or individuality.

An underlying White Australian racism aggravated the situation still further. Few Aborigines would have been surprised by the violent anti-Chinese riots in the goldfields of Victoria in the 1850s, and in New South Wales in the 1860s (Willey, 1978). In many ways, it was simply a replay of what they already had experienced. The immigration restriction acts passed by the colonial and, later, the Federal parliaments, were only the latest legislative symbol of an unpleasant reality faced by Aborigines throughout their lives. Daily, they were confronted with an ideology which lauded Australia as a White haven which, 'unfortunately', had a 'native problem'. The problem was considered less severe than similar problems faced by the other British dominions, and especially South Africa, however, as, according to the prevailing White belief, Aborigines were a more

primitive and inferior version of man, doomed to extinction through death or absorption into the White population.

This is not to suggest that Aborigines had no part at all in the new order, but, rather that White Australian society was ill-equipped to cater for their presence in such a way as to afford them a satisfying and meaningful life. Government policy throughout most of this early period was directed first towards minimising conflict between Aborigines and Whites and, secondly, towards ameliorating the effects on Aborigines of the White occupation after it was complete (Long, 1970). In so far as the Aborigines on the Far South Coast were no longer considered to be a threat to the Whites settling in the area, the first part of the policy was achieved by the late 1840s (Lambie, 1848). The second part of the policy was less successful. Government assistance prior to the 1890s was limited to the establishment of a few small reserves for camping, rations of food and blankets administered by the police, occasional grants of fishing boats and equipment,⁽¹⁾ and the restriction of alcohol sales to Aborigines (Long, 1970).

But for the most part, the Aborigines depended on property owners for their sustenance and camping areas. Most continued to participate intermittently in the rural labour force as general hands and seasonal workers. But their relative importance to the White community diminished as their numbers decreased in proportion to the total population in the district; and, as the scope of economic

(1) The fishing boat used by Umburra (or Merriman), one of Howitt's (1904) informants concerning the traditional life of South Coast Aborigines, for example, is likely to have been granted by the government. Typical of other Aborigines at the time, he had worked previously as a farm hand throughout the district. Records of his accounts while working for the Jaunceys, a family of early White settlers at Angledale, still exist (Egloff, 1979).

activity in the region broadened, Whites become less dependent on Aboriginal labour, knowledge and skills. Increasingly, the local Aborigines were forced to survive as best they could on the fringes of the new society. Like their ancestors, they developed an itinerant lifestyle, living for the most part in small groups, scattered throughout the region. The men in particular wandered up and down the coast over a regular 'beat', seeking work and visiting relatives and friends (Bell, 1956; Interview 66.2).

Progressively this lifestyle transformed what was a patrilineal culture into a matrifocal subculture. In neighbouring Gippsland and other parts of Victoria, this process appears to have been facilitated by the introduction of managed Aboriginal stations during the 1850s and 1860s. Barwick (1970) notes, for example, that the Victorian Aboriginal Protection Board and missionaries usurped much of the "political, familial, religious and economic authority" (p.31) of the males. Other powers simply were taken over by women and yet others voluntarily yielded to them by the men. On the New South Wales Far South Coast, however, government and missionary activity was less well organised during this period, and consequently, probably was less influential in contributing directly to the changing status relations between Aboriginal males and females.

Nevertheless, other forces were producing a similar result. The powerlessness of the men to prevent White usurpation of their land and disregard for their laws and beliefs undermined their traditional authority and deprived them of their economic independence. Their prolonged absences in search of work or for other reasons left the women with greater control over familial matters and the socialisation of children. The sexual imbalance in the colony generated a strong demand for Aboriginal women, who consequently became increasingly

familiar with White culture, thus hastening the decline of traditional sanctions on their behaviour and enabling them to experience enhanced status and emancipation. More research is required to determine if the process of declining male status and increasing female status was accelerated with the introduction of managed stations towards the turn of the century, as had occurred earlier in Victoria; but the matrifocal pattern of the emerging subculture appears to have been set in motion well before managed stations were introduced.

Alcohol also has played a major role in the emerging subculture; more so than Lewis' model would suggest. Aborigines were not the only ones to have a predilection for alcohol in the early whaling and squatting days, and it is instructive to note that the first building of substance in Bega was an inn (Bayley, 1942); but for proportionately more Aborigines than Whites, its consumption in copious amounts rapidly became a way of life. It eased the pain of physical and cultural subjugation and their attendant illnesses and humiliations, and helped overcome the fear of repercussions from non-adherence to the rituals demanded by other kinds of spirits. The pain of being Aboriginal in a White society was still acute in the 1970s. Summarising what he saw as the reasons for the high levels of Aboriginal alcoholism still prevalent at this time, an Aboriginal counsellor for an Aboriginal alcoholics rehabilitation group, who himself is an ex-alcoholic, commented simply: "Feelings is what makes people drink" (Interview 68.3).

Alcohol also provided an outlet for emotions - pent-up frustrations and anger - that often were misdirected at other Aborigines. It led to murders in 1856 (Illawarry Mercury, April 13, 1857), public brawls between women in 1926 (Bega District News, January 14, 1926), and smugness and ridicule by Whites from at least the 1880s

to the 1950s.⁽¹⁾ Even as late as the 1970s, it continued to be "*the* problem" amongst Aborigines (Interview 6.3) and accounted for about one hundred of a total one hundred and fifty arrests in the Bega district (Interview 21.1). As pointed out by one resident of Wallaga Lake, who had been drinking wine at the age of six while working with his family in the bean paddocks: "Instead of Aboriginal children being handed down a culture, they were handed down a bottle" (Interview 66.2).

6.6 INSTITUTIONALISATION (1890s-1960s)

By the 1890s, the economy of the Bega Valley was undergoing further adjustments. Beef production, maize growing and pig fattening remained as major industries and fruit growing, fishing and forestry continued to be important. But wheat and wool production had declined substantially and dairying was gaining in prominence (Bayley, 1942).

These changes demanded only minor variations to the economic life of the Aborigines. They no longer were required for sheep washing, shepherding or shearing, but they remained itinerant rural labourers, engaged for the most part in seasonal work, with forestry perhaps assuming greater importance. But the proliferation of dairy farms, where livelihood was based on long hours of hard labour, fortified the conservatism of the White community. Decreased tolerance to those less enamoured of the work ethic consequently is likely to have widened the sociocultural gap between Aborigines and mainstream White society in the district.

(1) For example, "dusky sons of the soil" (Bega Gazette, April 14, 1883); "An Abo courtship" (Bega District News, December 24, 1931); "Hefty constable" arrests "darkie" for drunkenness after "hot pursuit" (Bega District News, January 19, 1954).

Changes in government policy also only added to the differences between Aborigines and Whites in the region. Following the example of Victoria over twenty years earlier, and in response to the exhortations of missionaries such as Matthews and Gribble, and to pressure from the Aborigines Protection Association, the New South Wales Government appointed a Board for the Protection of Aborigines in 1883 (Long, 1970). Officially its aim was to implement more enlightened and systematic policies towards the Aborigines. In practice, it meant that the lives and destiny of the Aborigines were to be subject to more refined institutionalised control by government bureaucracy.

Specifically, the Board sought to exercise this control by first separating Aborigines from White communities. Towards this end, the number of land areas reserved for Aborigines in New South Wales was increased from eighteen to one hundred and seventy between 1883 and 1910. An immediate outcome was the transfer of dependence by Aborigines from property owners to the government (Long, 1970). The next step was to provide education and training for able-bodied residents to equip them for the outside community. To cut costs, and to promote 'good work habits', the communities, where possible, were to be at least partially self-supporting. They also were to serve as sanctuaries for the aged and infirm and, in the eyes of some, to provide a 'dying pillow' for full-blood survivors of the European occupation. In 1909, the passing of the Aborigines Protection Act finally gave the Board the legal power it sought to intervene more directly in the lives and movements of Aborigines in pursuit of its policies.

The centrepiece of the Board's policy on the Far South Coast of New South Wales was the Aboriginal station at Wallaga Lake. With a population of ninety-one, of whom twenty-six were full-bloods, it had

been declared a reserve in 1891, and became the Board's first⁽¹⁾ Aboriginal station⁽²⁾ in 1899. But, rather than becoming a self-supporting, agricultural community, a successful training centre, and a safe refuge for the aged and infirm, it became "a stinking, rotten government mission station" (Dixon, 1975, p.32), in which large, fatherless families; overcrowded, poor housing; poor health care; isolation; high rates of unemployment, and dependence on social services combined to trap the residents in a "vicious circle of poverty" (Long, 1970, p.89). Its history was typical of many such stations and epitomised the failure of the policies, not only of the Aboriginal Protection Board, but also of its successor, the Aboriginal Welfare Board.

A major reason for the failure of these policies, as Long (1970) points out, was their ambiguity. They sought to promote both amalgamation and separation simultaneously. On the one hand, the 'Aboriginal problem' was to be solved by absorbing the mixed-bloods into the White population as the full-bloods died out. On the other hand, the stations were supposed to become self-sustaining, segregated communities. The fact that able-bodied residents could not be in two places at once apparently was not fully appreciated by the policy makers, or at least was not acknowledged officially by them.

In addition, the goal of economic autonomy clashed with the role of the stations as refuges for the 'socially inadequate'. The dilemma was stated succinctly by Long (1970) when discussing the expulsion policies of the Board, and is encapsulated in the question:

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- (1) The board previously had taken over three existing stations from the Aboriginal Protection Association, however, and had established two homes for Aborigines.
 - (2) The essential difference between a reserve and a station was that the latter had a White resident manager.

Who should be expelled ... the 'socially inadequate' for disrupting social order in the community, as was commonly the case; or the hard workers who had proven their capacity to fend for themselves and who consequently did not need a refuge?

Sporadic emphasis on one or other of these goals doomed each to failure. As part of the Board's policy of preparing Wallaga Lake residents for life off the station, for example, a school was opened there in 1891 and remained open for most⁽¹⁾ of the period up to 1964 when the children were transferred to a racially-mixed primary school at Bermagui. But the school was not integrated into the public education system and the schooling was conducted by the station managers or their wives, few of whom were qualified as teachers, and some of whom may have been illiterate themselves (Dixon, 1975). Not surprisingly, children could pass through such a system without having learned to read or write, and at least one ex-student of the Wallaga Lake school had to wait until he was in jail before mastering these skills (Dixon, 1975). Others were classed as 'uncontrollable' and were placed in special institutions where, presumably, they would learn to become more amenable to control by the authorities (Interview 66.1). Frequently, the station managers and their wives were equally unqualified for their roles as health-care and social-welfare workers.

In addition, although scenically situated, Wallaga Lake station, like many others, was isolated from centres of employment. It was over 65 kilometres from Bega, the largest town in the district, and about 24 kilometres and 16 kilometres from Narooma and Bermagui respectively, two smaller towns in the area. As a result, many families left the station to live in shanty dwellings on properties, or on

(1) It was closed from 1895 to 1898.

riverbank sites closer to sources of employment. They returned to the station during the off-season if they were seasonal workers, or during periods of economic downturn or drought when employment was unavailable.⁽¹⁾ Consequently, the population of Wallaga Lake fluctuated markedly, both seasonally and yearly. Its peaks approached one hundred and seventy, while its troughs dropped to about sixty. As the able-bodied were most often the ones who left, lack of manpower contributed to the decline and overall poor success rates of agricultural projects attempted at the station.

Underlying such difficulties, however, was the lack of a consistent, coherent policy supporting the development of these projects. It is probable that the implementation of such a policy was never seriously contemplated, and that these projects were never considered as more than half-way measures in a programme directed ultimately towards ensuring the peaceful disappearance of Aborigines as a distinct ethnic or sociocultural group in New South Wales. But it was not until 1953, when large numbers of non-British immigrants were being introduced into the Australian population, that the *stated* objective of creating self-sufficient stations was abandoned officially, and a policy of assimilation⁽²⁾ pursued more rigorously and unambiguously.

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- (1) Many Aboriginal stations, including Wallaga Lake, experienced an influx of residents in 1928, when employers were required to pay Aborigines at the same rate as Whites doing similar work (Long, 1970).
- (2) 'Assimilation' was the official term used by government to describe its policy of absorption of Aborigines into mainstream Australian society. To avoid confusion between this use of the term and the more general concept of sociocultural assimilation introduced in this Chapter, the term 'absorption' is used henceforth when referring to government policy.

Long (1970) suggests that this new clarity of officially-declared purpose had its origins in the late 1930s, in a report by the Public Service Board inquiring into the workings of the Aboriginal Protection Board, made in response to mounting public criticism of that Board. Although the methods proposed in the report were simply an update on those used earlier, the inquiry paved the way for the replacement of the Aboriginal Protection Board by the Aboriginal Welfare Board in 1940 and made more explicit the goal of absorption which the Welfare Board was to pursue in later years.

6.7 PEAS AND BEANS

The 1930s also marked the beginnings of a change in the specific content, but not the overall style or substance, of the economic life experienced by Aborigines on the Far South Coast. In their report on the economic and social conditions of Aborigines on the South Coast between 1920 and 1975, Castle and Hagan (1976b, 1978)⁽¹⁾ note that the first pea and bean crop near Bega was harvested in 1932, and that by the early 1950s, Aborigines worked the fields almost exclusively. Some continued in other forms of employment (such as timber mill hands) or complemented bean and pea picking with other forms of seasonal labour (such as corn pulling), but the harvesting of beans and peas remained by far the major source of employment for Aborigines in the region (Bell, 1956; Scott and Company, 1969, 1972).

During harvest time, from late October to early May, as many as four hundred to five hundred Aborigines would cluster around Bega. Many were trucked in from Lake Tyers and surrounding areas by the

(1) The Castle and Hagan study was conducted in conjunction with the present inquiry, and many of the primary sources for both are the same (see footnote, Chapter 5, p.266).

growers. Most of the rest had South Coast affiliations, but some were attracted from as far as Queensland and South Australia. The annual gathering provided a social occasion for many, and the amount of money they could earn was substantial. Rates of pay were matters of agreement between the growers and the non-unionised pickers.⁽¹⁾ They were based on the prices the grower was willing to pay per 52 lb. bag.

The Aborigines lived where they could - mostly in extremely poor, insanitary conditions - in tents, self-made tin shacks and old car bodies. Many congregated at riverbank sites such as Murrays Flat or Reedy Swamp Road on the outskirts of Bega, or near local dumps such as Tarraganda and Stoney Creek, where refuse (such as packing cases or flattened biscuit tins) was more readily available for use as building material (Rowley, 1970b). Others lived on the growers' properties⁽²⁾ where conditions often were only marginally better; some were housed in small huts, but most lived in communal dwellings such as tents, old cowsheds (Harris, 1968; Interview 6.3), or old tram bodies especially imported for the purpose (Interview 11.1). Few had electricity, connected water supply or sanitary toilet facilities. Poor hygiene and infectious diseases were common, and the infant mortality rate was especially high.

This remained the situation until the late 1960s. Part of the reason, Rowley (1970b) points out, was the friction that arose between Mumbulla Shire Council and Bega Municipal Council. Bega reaped the rewards of the annual population influx, through the increased custom which it generated; but most of the Aborigines lived in the

(1) The farmers deducted the cost of food and other supplies, and were sometimes accused of overcharging (Rowley, 1970b).

(2) The owners attempted to secure what they considered was unreliable labour by allowing Aboriginal families to live on their properties in the off-season as well, under the condition that they worked for no-one else at any time.

surrounding Mumbulla Shire, thereby freeing Bega Council of legal responsibility regarding their health, sanitary conditions and housing standards. In Rowley's words, "Bega had no Aboriginal community, only Aboriginal business" (p.255). Mumbulla Shire Council consequently favoured integrating the Aborigines into the Bega community, even to the point of disbanding the Wallaga Lake community. Although recognising the need for improvements, Bega Council, not surprisingly, advocated a solution that would essentially retain the status quo. As a consequence, few real improvements in the living conditions of Aborigines were initiated by either Council.

6.8 CULTURAL ASSIMILATION AND ACCOMMODATION

This neglect by the Councils was merely a local variant of a more deep-seated insensitivity to Aboriginal needs by policy-makers at all levels of government. The underlying, if not always explicit, objective of absorbing Aborigines into mainstream White Australian culture showed little concern for the psychological requirements of Aborigines and little understanding of the sociocultural forces bearing upon them.

The methods used to induce absorption were especially resented by Aborigines. Frequently, they offered passive resistance by avoiding authorities charged with the responsibility of administering policies which they disliked. Rowley (1970b) notes, for example, that as well as having economic reasons for leaving Wallaga Lake, many Aborigines left to escape the paternalistic management of their lives by government officials. Others were encouraged to leave, whether they wished to or not. Harassment by local government officials such as health inspectors, who ordered the destruction of shanty dwellings in which many Aborigines lives (as occurred at Stoney Creek amid glaring

publicity in 1964) caused considerable resentment among those whom it affected (Rowley, 1970b; Interview 74.1).

Even more bitter was the hostility generated by the practice of both the Protection Board and the Welfare Board, of removing children from parental influence and placing them in institutions or White foster homes. The resistance that was offered was not always passive. A slap in the face received by Rowley, when he was mistaken for a Welfare Board officer by a female resident of Reedy Swamp Road who believed he was responsible for taking her child, was only a mild indication of an underlying resentment to the Board's policies; especially when contrasted with an incident involving an axe-wielding mother reportedly faced by at least one real officer of the Board (Interview 6.3).

This insensitivity by government officials and policy-makers, however, was perhaps an inevitable response by a powerful sociocultural group to the presence of a far less powerful one - a product of as yet ill-defined sociocultural and socio-psychological mechanisms that regulate adaptations in culture-contact situations and which ultimately may have a neuro-biological foundation. In terms of the Piagetian-based paradigm referred to at the beginning of this Chapter, it is a manifestation of an intrinsic tendency of a sociocultural group to assimilate new cultural elements into its existing sociocultural framework, with minimal disruption to the psychological structures of its members which this framework reflects and supports.

Only when this existing sociocultural framework proves incapable of accounting for the additional demands placed on it, is it likely to be modified in a form of cultural accommodation. The laws regulating Aboriginal movements; the provision of welfare in the form of food, clothing and, later, money; the introduction of reserves and

stations; and the establishment of organisations such as the Aboriginal Protection and Welfare Boards; can thus be considered as successive accommodations by White Australians to the presence of Aboriginal Australians in an, as yet, unsatisfactory attempt to incorporate them into the existing broader Australian sociocultural framework.

The subculture evolved by the South Coast Aborigines can be explained similarly. It is, in part, an outcome of stress-reducing accommodatory mechanisms that progressively have adapted the region's indigenous inhabitants and their heirs for life on the fringes of a post-colonial, capitalist, industrial society. As has been discussed (Chapter 4), although modified somewhat by successive government policies and local social and economic conditions, many of these accommodations, in essence, are similar to those required of kindred groups elsewhere in the world. But the final character of the subculture also appears to have been influenced by its tendency to assimilate what was possible into pre-existing, traditional patterns or frameworks.

For, despite the rapid decline in the population of full-blood tribal initiates⁽¹⁾ following European contact, sufficient numbers survived long enough to preserve links between the traditional culture of their ancestors and the emerging subculture of their descendants. The precise nature of the relationship between these individuals and the succeeding generation of uninitiated mixed-bloods and, hence, the nature and extent of traditional knowledge, beliefs and practices that have been passed on, is unclear. But some recent studies suggest that the influence of traditional social patterns, knowledge and

(1) The death in the early 1960s of J. Hammond, known to the local Whites as 'King Billy', may have marked the disappearance of full-blood Aborigines of South Coast origin. He was reputed to have been the grandson of Biamanga (Jack Mumbulla), a South Coast tribal elder around the turn of the century (Bega District News, June 1, 1962).

beliefs on the lives of contemporary Aborigines in the area may be greater than is usually credited for relatively high-contact Aborigines by social historians and anthropologists.

6.9 TRADITIONAL REMNANTS

Lampert and Sanders (1973), for example, were surprised to find that an older resident of Wreck Bay, a community near Nowra which has close contact with Aborigines on the Far South Coast, could name over forty plants used as traditional foods, medicines or poisons, as well as describe their preparation. Interviews conducted as part of the present inquiry revealed also that medicinal remedies, thought to have traditional origins, may still be used by Aborigines in the area, including some town dwellers (Interviews 6.3; 71.1).

In addition, although the ineffectiveness of Daramulan and his spiritual aides in combating the god, guns and germs of the invaders may have contributed to his and their demise as significant components of contemporary South Coast Aboriginal mythology, belief in supernatural forces remains strong. Several middle-aged residents of Wallaga Lake, for example, had childhood memories of the importance of shadows to older members of the community, one of whom had tribal markings (Interviews 69.1; 67.3). Similarly, traditional forms of magic may no longer be practised, but Dawson (1969) found that the use of magic, both as a social sanction and as a curative agent, remained an important source of psychological conflict for many Wallaga Lake residents. Some older South Coast Aborigines also vividly recall from their youth a 'Grannie Tongia', who was reputed to have considerable curative and magical powers (Egloff, 1979).

Amongst town dwellers, who identified more with White Australian than with Aboriginal lifestyles, 'miracles' rather than 'magical acts' were cited as evidence of the power of supernatural forces. A resident of Eden, for example, claimed to have experienced such a miracle (Interview 71.1). Along with many others, he belonged to the Eden Valley Aboriginal Evangelical Fellowship, the pastor of which, to some extent, had a role and status that paralleled in the modern context, the religious role and status of Gommeras in the traditional context. The attraction which Pentecostalist movements have for such groups also may reflect a fair degree of compatibility between the psychological structures underlying acceptance of traditional Aboriginal beliefs and those underlying acceptance of Fundamentalist Christian doctrines.

Traditional psychological predispositions in other spheres also appear to have been perpetuated. In particular, the emphasis in traditional society on visual and motor skills rather than on oral skills, and on memory rather than on logic, continues to impede the performance of Aboriginal children at school. As one Aboriginal mother of several primary school children pointed out, Aboriginal children will learn far more quickly if shown what to do, rather than if spoken to from the front of the classroom and exposed only to blackboard drawings and diagrams (Interview 67.2). This emphasis on visual over oral forms of communication is evidenced in the early occupations of Aborigines as spotters for whaling and fishing boats, and as trackers and guides. It also may be influential in more subtle, but understudied areas, such as 'body language'. Most non-Aborigines who have come to know Aborigines well, for example, quickly become aware of the heightened sensitivity of many to non-verbal cues. The persistence of

these characteristics may be due to the intimate and prolonged nature of the socialisation processes involved in shaping their initial development.

Other elements of continuity between the contemporary residents of Wallaga Lake and their tribal predecessors have been noted by Egloff (1979). Initiation ceremonies, for example, may have occurred at Stoney Creek, near Bega, in 1855 and near Bermagui in 1867.⁽¹⁾ At Howitt's (1904) instigation, another was held near Bega in 1883 and South Coast groups were reported by Matthews (1896) as having attended one held near Nowra in 1886. A participant of the last, which is thought to have occurred around 1910 near either Bega (Egloff, 1979) or Bermagui (Interview 7.2) was reported as still living at Wreck Bay in 1979 (Egloff, 1979).

Despite the decline in the overall authority of initiated individuals from the time of European contact, they remained custodians of what remained of tribal law and mythology. They have thus retained a degree of respect from other members of the communities to which they belong. Although, as already noted, the amount of information they have passed on is uncertain, their authority in matters relating to tradition appears to have been inherited, albeit in weaker form, by some of their uninitiated mixed-blood successors. The strength of this authority throughout most of the twentieth century is unclear, but an apparent resurgence has been occurring over recent years. The authority of an older member of the Wallaga Lake community with regard to traditional culture, for example, was acknowledged by many Aborigines with South Coast origins who were interviewed as part of this inquiry. The possibility that such individuals may have acquired some of their

(1) Bega Gazette, April 14, 1883.

information through the written records of White intermediaries such as Howitt or Matthews, rather than directly from their ancestors, is unlikely to diminish their status, and may represent an important phase in dovetailing the accommodatory mechanisms of both sociocultural groups.

Respect for older members of the community in general is a characteristic many contemporary South Coast Aborigines share with their tribal ancestors. The practice of calling selected older women 'auntie', regardless of kinship affiliations, for example, was widespread and considerable deference was shown to them (in the presence of the White interviewer, at least) on a wide range of matters, by others in the community, including at least one male adult with relatively high occupational status (Interview 86.2). Older full-bloods who lived at the turn of the century are still held in high regard by some community members, and funerals of especially aged members of the community continue to be very important occasions (Egloff, 1979; Interview 66.2), much as they were when Robinson visited the area in 1844.

Kinship ties and social relations also have continued as important elements which the new subculture shares with the old culture. Most older Aboriginal residents of the South Coast have a comprehensive awareness of family connections of community members, and the practice of establishing kinship connections by those meeting for the first time continues to be part of a social ritual. Most traditional rules governing kinship relations have fallen into disuse, but the affiliative needs of many South Coast Aborigines have frequently outweighed their material concerns (Interview 17.1). The old pattern of reciprocal obligations, for example, has proved functional in the new

circumstances, as it casts extended families in the role of social and psychological safety nets for the demoralised, alienated, and desperate. Thus it has persisted, despite the unresolved attitudinal conflict it generates as a consequence of its opposition to White Australian social pressures (Dawson, 1969). So strong is this characteristic that some South Coast families continued their practice of sharing available resources, including accommodation, with their relatives, even when under threat of eviction for not adhering to Housing Commission rules designed to ensure that households are made up only of nuclear families (Interview 6.3)

South Coast Aborigines also share a common sense of territoriality or regional identity that sets them apart from other Aborigines (Interviews 6.3; 12.1), and which may have tribal origins. Throughout the last century, Tableland groups moved down to adjacent coastal settlements, and many South Coast people moved up and down the coast from Lake Tyers in Victoria to La Perouse in Sydney. Today, most have strong kinship and friendship ties throughout the region. With the exception of Gippsland (Lake Tyers), this area encompasses the boundaries of what were two adjacent ceremonial groupings in which the tribes spoke closely-related languages and shared the same myths, traditions and ritualistic practices. Even the Gippsland tribes had some contacts with the southern groups in this area. Alternatively, however, the bonds linking South Coast groups may have been forged as a consequence of post-colonial influences such as government policies, administrative divisions, economic patterns or migratory labour movements. Possibly both sets of influences have been operating. But whatever its origins, the common sense of identity that has emerged among South Coast groups has not, until recently, been reflected in a

high level of social organisation, or common interest groupings. Even those organisations that have emerged over the last decade⁽¹⁾ tend to be localised to specific communities, and not infrequently have become weakened by family rivalries and jealousies (Interviews 4.5; 81.1).

6.10 A NEW DEAL

Throughout the 1960s, a combination of international and national pressures, and local initiatives and economic changes, substantially altered the way of life of many Aborigines on the Far South Coast. Internationally, the nuclear checkmate between the United States of America and the Union of Soviet Socialist Republics; the limitations of conventional arms and American power as demonstrated in Vietnam; the loss by European powers of traditional markets and resources with the decline of their overseas empires; increased competition from Asian and South American manufactured products; the rise of cartels such as the Organisation of Petroleum Exporting Countries (O.P.E.C.); and the increasingly critical and influential voice of non-White spokesmen generally in international affairs, have forced Western societies to accommodate themselves to the limitations of their own power and to the increasing power of others, by re-evaluating many of their underlying assumptions and transforming themselves accordingly. In the process, as noted in Chapter 1 (1.3.2) and 4 (4.1), a climate more favourable to minority groups has been created in many Western states.

(1) These include the Aboriginal Evangelical Fellowship centred at Eden, the Bega Valley Aboriginal Advancement Association centred at Bega, and the resident group managing Wallaga Lake.

In addition, the individuals comprising the population bulge caused by the post-World War II baby boom in these countries, have become more highly educated than any previous generation. In the process, many were being exposed to alternative value systems through such subjects as Sociology and Anthropology. In the United States, the impetus given to the non-White Civil Rights Movement through benchmark legal decisions in the 1950s, was reinforced by race riots in many cities throughout the 1960s. Throughout the period, pressure increased on Australia to reconsider its White Australia policy, and the poverty, disease and demoralisation of Aborigines was subject to increasingly extensive and critical publicity.

Information on Aborigines had received a boost with the establishment in 1962 of the Australian Institute of Aboriginal Studies; but it was the success of the Referendum in May 1967 which gave the Federal Government power over Aboriginal affairs, and the establishment, shortly thereafter, of the Office (later the Department) of Aboriginal Affairs that proved a watershed for their subsequent history. In New South Wales, the Aboriginal Welfare Board was disbanded in June 1969. Its functions were incorporated into other State Government agencies under the direction of a Directorate of Aboriginal Welfare.

On the Far South Coast, these pressures and events coalesced with local initiatives and economic changes to produce, eventually, substantial improvements in the living conditions of Aborigines in the region. Growing mechanisation in many primary industries, a decline in dairying, and discrimination in other forms of employment (including council work), had strengthened the dependence of Aborigines on bean picking throughout the 1960s. But by the middle of the decade, their intense deprivation and heightened visibility during the picking season

had attracted national publicity and had prompted some action by Mumbulla Shire Council to 'improve' the situation. For the most part, however, these actions were limited to unsuccessful calls for a conference on the 'problem' and, as has been noted, to the removal of shanty dwellings from Stoney Creek and similar areas. Ostensibly, the destruction of these campsites was undertaken for health and educational⁽¹⁾ reasons; but not incidentally, it also removed the most visible and to many Whites, the most offensive signs of Aboriginal poverty.

More enduring action was initiated by the local Anglican Minister, Rev. F. Woodwell, when he established the Bega Valley Aboriginal Advancement Association (B.V.A.A.A.) shortly after the Referendum of 1967.⁽²⁾ Taking advantage of increasing Federal Government involvement in Aboriginal affairs, the Association concentrated initially on improving the health and housing of the local Aborigines and, towards this end, employed a Federally-funded social worker from 1968. Following repeated failure to secure rented accommodation for Aborigines in Bega township, and against considerable opposition, Woodwell also made available, for Aboriginal housing, Church land that was located in prime real estate areas of Bega. The first house was built by a Christian Youth association.

Employment was the next target. If the cycle of poverty, poor health and dependence on the growers was to be permanently broken, alternative forms of employment were necessary. But work opportunities

(1) One alderman even claimed that the children would be closer to a school once they were removed to Wallaga Lake, ignoring the 16 kilometres between the station and the closest school at Bermagui, which was far in excess of the distance between the campsites and schools in Bega (Rowley, 1970b).

(2) See Castle and Hagan (1976b, 1978) for a more detailed discussion of this project.

for Aborigines in Bega were rare. Despite growth in agricultural output in the region, primary industry had declined steadily in relative importance as an employer of labour since the Second World War (Castle and Hagan, 1976a). Expansion of the tertiary sector of the economy in the area accounted for most new employment opportunities, but few Aborigines had the necessary qualifications to benefit from any openings. Consequently, the B.V.A.A.A. promoted a combination housing and employment scheme centred at Eden (the Kiah project).

At the time, Eden was undergoing considerable growth as a result of the expansion of the tourist and fishing industries and the establishment of a woodchip mill. The scheme involved training and supplying Aborigines for employment as tree fellers, and providing them with caravans in which to live, pending their acceptance for government housing. The B.V.A.A.A. was to act as their employers, and as sub-contractor to the woodchip mill. Castle and Hagan (1978) note that, despite considerable 'teething' problems, the scheme proved successful. The Aboriginal workforce had a slower turnover than the general workforce, and many subsequently found permanent employment in other industries. These efforts complemented Federal Government initiatives directed towards providing Aborigines with better housing (H.F.A.),⁽¹⁾ greater employment opportunities (R.E.D.),⁽²⁾ improved health care and considerable educational support. Together both sets of influences transformed the lives of many Aborigines in the area. By the mid-1970s, the bean industry was declining and many Aborigines were living in Housing Commission houses scattered throughout the White communities in both Bega and Eden.

(1) Housing for Aborigines Scheme.

(2) Regional Employment and Development Scheme, with which an Employment Training Scheme for Aborigines was linked.

6.11 CONCLUSION

These latest accommodations by both groups may contribute substantially towards overcoming many characteristics of the 'culture of poverty' experienced by South Coast Aborigines. Their dispersion in the White community must increase their contact with Whites. The pressures on them to conform to White Australian lifestyles, therefore, are likely to be greater. At the same time, however, the comprehensive recent attempts by government to provide Aborigines with the skills, incentives and opportunities for greater participation in the institutional structure of the dominant society represent important modifications to the White Australian sociocultural framework that should facilitate the merge with it of Aboriginal sociocultural patterns.

But the accommodatory capacity of Aborigines, like that of White Australians, is limited. It will take time for them to 'digest' these structural changes to their lifestyle. Consequently, many characteristics are likely to persist for some time, perhaps for generations, as Lewis suggests. Matrifocal families, high rates of unemployment, unsound financial management, gambling, alcoholism, low levels of education and minimal participation in other than Aboriginal organisations, for example, continue to differentiate them from working-class White Australians living in the same towns, as evidenced by this inquiry (Chapter 7).

In addition, not all Aborigines in the area have experienced the same degree of change as others. Contrary to expectations, participants in the Kiah scheme were not given priority for government housing. Aborigines from outside the area, attracted by both the housing and employment opportunities around Eden, at times were

considered more acceptable as tenants by the Housing Commission than were South Coast families, and thus received preferential treatment. Many South Coast families, therefore, were forced to wait, and some missed out altogether. Several families continue to live in substandard housing on the outskirts of Bega and surrounding areas. Wallaga Lake also continues to be distant from sources of employment, and housing conditions there are often poor with much overcrowding. The stranglehold by bean growers on Aboriginal employment in the district may have been broken, but with the economic downturn of the late 1970s, many Aborigines have again found themselves unemployed (Castle and Hagan, 1979). Like their ancestors at the end of the last century, many have simply transferred their dependence from the property owners to the government.

It is probable, as Lewis' model suggests, that Aborigines would have developed characteristics of a culture of poverty in a free-enterprise economic system, regardless of specific government policies (discounting genocide). From the beginning there was a contradiction between the Europeans' stated aim of protecting Aborigines and their usurpation and exploitation of Aboriginal land. The reality for Aborigines was that they had to contend with an expanding, aggressive European social system that was the product of powerful historical, political and economic forces over which neither they nor the Whites had much real control. Like other indigenous peoples that were the victims of this expansion, they were unable to pursue traditional lifestyles and were prevented both by White society's prohibitions and by their own inhibitions from other than peripheral participation in the new order. It is not surprising, therefore, that they would find adaptive, many characteristics which other groups in similar circumstances also have found functional.

Nevertheless, specific government policies did represent accommodations by White Australians to the presence of Aborigines that, limited as their effects were, did influence the nature of accommodations made, in turn, by the Aborigines, thereby contributing to the distinctive character of the Aboriginal version of the culture of poverty. The more comprehensive provision of welfare services from the late 1960s, for example, had a substantial impact on the lives of many Aborigines, and ultimately may undermine the culture of poverty. Similarly, the establishment of stations such as Wallaga Lake near the turn of the century appears to have facilitated the continuation of some elements of traditional culture that otherwise may have disappeared.

Wallaga Lake residents also form the spearhead of recent attempts by South Coast Aborigines to reaffirm their Aboriginal heritage. With the abolition of the Aboriginal Welfare Board, and the subsequent advent of policies directed towards encouraging Aboriginal self-determination, the community has become self-managing. By the mid-1970s, plans for upgrading the housing and entertainment facilities of the community, and for exploiting the agricultural, marine and tourist economic potential of the site were well advanced, though still dependent on government support (Interview 66.2). An important additional feature of the overall strategy for improving the conditions and overcoming the demoralisation of many of the residents there, was the establishment of pride in their past. Towards this end, they have given renewed emphasis to traditional teachings and have sought legal protection of sites they claim were regarded as sacred by their ancestors.

As indicated in Chapter 4 (4.4), this reaffirmation of their Aboriginal heritage complements contemporary attempts by other Australians to redefine Australian society in terms of multiculturalism

rather than Anglo-Saxon monoculturalism, and both trends represent important new steps in the accommodatory processes of both groups, which, like the improved welfare services may, in time, destroy the psychological and social core of the culture of poverty. At present, however, this has not happened, and with the economic downturn of the late 1970s, and the decreased real expenditure of the Federal Government over recent years, it is unlikely to happen in the foreseeable future.

In summary, then, the subcultural and accompanying psychological characteristics of South Coast Aborigines can best be understood, perhaps, as functional adaptations by a dispossessed indigenous group and its heirs to the disruption of traditional cultural patterns and the imposition of a powerful capitalist, economic, social and political system. They represent a human response to conditions of material hardship, to feelings of impotency, and to intolerable levels of psychological stress generated by incompatibilities between the old and the new sociocultural systems.

Underlying these adaptations and providing the subculture with its distinctive character, are complex sociocultural and psychological processes. In particular, assimilatory and accommodatory sociocultural (and ultimately psycho-biological) mechanisms may be placing limits on the repertoire of responses possible for both Aboriginal and White groups and individuals in a given generation. The result has been the emergence among South Coast Aborigines of a distinct profile of the subculture of poverty. Characteristics shared in common with similar groups elsewhere have been modified by local economic conditions and individual initiatives, government policies and the persistence of elements from the traditional Aboriginal culture of the region.

Like the behaviours, values and beliefs that have been shaped by these processes, cognitive and language structures also are greatly influenced by culture (Chapters 2 and 3). The results of an empirical study of the influence of the subcultural characteristics of South Coast Aborigines on their performance in these domains are reported in the Chapter that follows.

CHAPTER 7

QUANTITATIVE RESULTS: PRESENTATION

7.1 INTRODUCTION

The quantitative results have been analysed from two broad perspectives. The first focuses on 'differences'; the second on 'interactions'. The presentation of the analysis, therefore, has been divided into two sections which correspond to these perspectives. In Section 1 (7.2 to 7.5), differences are examined under three headings: 'scholastic status and absenteeism'; 'language and cognition'; and 'culture and personality'. Except where inappropriate, each dimension is examined according to four criteria: the race of the subjects; their sex; the school they attended; and their age group. Section 2 (7.6 to 7.25) encompasses an analysis of 'interactions' between variables for each ethnic group, and is described later in the Chapter. An interpretation of the results follows in Chapter 8.

7.2 SECTION 1: DIFFERENCES

The statistics used in the analysis of differences varied according to the nature both of the scales employed and of the statistical assumptions underlying the characteristics they sought to measure. Where possible, parametric techniques were preferred over non-parametric procedures, as they make more effective use of the available data and, consequently, are more powerful in detecting differences that may be significant, especially if, as was the case for some comparison groups in this study, sample numbers tend to be small (Siegel, 1956).

Before discussing the specific procedures adopted for each gauge, however, some comment, albeit basic, concerning the interval 'quality' of the scales is warranted. A fundamental assumption

underlying parametric analyses is that the scales providing the scores upon which the analyses are based are composed of interval units. But the interval nature of many gauges used in the social sciences is less easily determined than it is for gauges of physical phenomena such as height or temperature. An inch, for example, refers to the same amount of length, regardless of where it may appear on a scale measuring length. Hence, the distance between 100 and 99 inches and between 16 and 15 inches is the same in both cases.

But less certainty exists with gauges such as the VE subtest. It is unknown, for example, whether a score of one unit for correctly noting that a letter can be placed in an envelope, and a score of one unit for correctly noting that a block is made of wood, are equivalent as measures of the ability to generate and verbalise concepts. Similarly, the ability to classify according to colour on the Nixon test may not be identical to the ability to classify the same objects according to diameter, yet both receive the same score. The position of the I & P Matrices is even less clear; items two to four require classifications based on two criteria in order to score one unit, while items five to eight require classifications based on three criteria to score one unit. The difference in classificatory ability between scores of four and five, therefore, may be greater than that between scores of three and four, or five and six.

Similar arguments apply to teacher ratings of scholastic application and performance. There can be no certainty that the difference between scores two and three on the scales used in this study is identical to the difference between scores three and four.

But such problems are common to many gauges used in the social sciences, and an overly strict interpretation of the notion of an interval unit would seriously hamper the use of parametric

statistical procedures in the analysis of social science data.

Fortunately, however, most parametric tests are considered sufficiently robust and flexible to allow for some leniency in the interpretation of what can be considered an interval scale (Armstrong, 1966). Hence, the increased difficulty of later tasks in the I & P Matrices Test, and the probable variations in difficulty between items on the other cognitive and language tests, were not considered sufficiently great to prevent them from qualifying as interval scales, since each assesses only a single dimension of cognitive or language performance. Similarly, the five-point rating scales used in the analysis of scholastic status were considered to be composed of interval units in the broader social science interpretation of the term, as each point was considered to be approximately equidistant from the next along a single dimension, either of number ability, reading ability, or application to school work.

The two locus-of-control gauges, the PPNS and the CNS, similarly require some leniency in the interpretation of their interval 'quality'. It is unlikely that a response in an external direction to one item is identical to a similar response to another item as an indication of an external locus-of-control orientation. Nevertheless, the care taken in the selection of items for the scales, and subsequent studies attesting to their validity (noted in Chapter 5), suggest that the match between the items is sufficiently close to warrant their acceptability as interval units from a social science point of view.

As other assumptions associated with parametric analysis (Siegel, 1956, p.19) also were thought to be satisfied for the scales assessing scholastic status, language and cognition, and locus of control, differences between scores on these gauges were analysed

using parametric procedures. In view of the restricted age ranges for which the two classificatory and two locus-of-control gauges are appropriate, and the consequent small sample comparisons available for these gauges, the added power of parametric tests in determining the significance of differences is especially important.

An examination of differences in teacher ratings of the scholastic status of children attending each of the three schools in the study, using analysis of variance procedures (see Table 7.1), revealed significant differences between the ratings of children who attended different schools. In general, the Eden children, whether Aboriginal or White, had a lower rating on each index of scholastic status than children who attended either of the other two schools. There also was a trend for Bega Aboriginal children to receive higher ratings than the Bermagui Aboriginal children, with regard to both number and reading abilities (but not to scholastic application), and a slight trend in the reverse direction for the White children, with the Bermagui group receiving slightly higher ratings in performance (but, again, not in application). For the Aborigines, these differences were significant for ratings of reading ability and scholastic application. Differences in the scholastic application of the White children also achieved significance and, when both ethnic groups were combined, not only were differences relating to ratings of reading ability and scholastic application significant, but ratings of number abilities also approached significance.

TABLE 7.1

SCHOLASTIC STATUS: SCHOOL-BASED COMPARISONS

Comparison Group	Teacher Ratings	Bermagui			Eden			Bega			F Value	Signif.
		N	\bar{X}	S.D	N	\bar{X}	S.D	N	\bar{X}	S.D.		
Total	Number	37	2.500	0.882	40	2.063	0.900	34	2.515	1.077	2.793	.066
	Reading	37	2.487	1.037	40	2.038	0.936	34	2.750	1.201	4.342	.015
	Application	37	3.405	1.013	40	2.263	0.961	34	3.382	0.835	18.454	.000
Aboriginal	Number	19	2.053	0.599	19	1.737	0.872	17	2.206	0.811	1.768	N.S.
	Reading	19	2.000	0.527	19	1.684	0.885	17	2.588	0.923	5.948	.005
	Application	19	3.316	1.108	19	1.974	0.950	17	3.235	0.687	12.013	.000
White	Number	18	2.972	0.899	21	2.357	0.839	17	2.857	1.257	2.059	N.S.
	Reading	18	3.000	1.201	21	2.357	0.882	17	2.912	1.439	1.735	N.S.
	Application	18	3.500	0.924	21	2.524	0.915	17	3.529	0.960	7.426	.001

Although these differences may reflect genuine variations in the scholastic status of children attending the different schools, a more probable explanation of them is that the Eden teachers tended to underrate the performance and application of their pupils, relative to age norms and/or that the Bega and Bermagui teachers tended to overrate the performance and application of their students.

As such 'between-school' variations in teacher assessments are a common occurrence (McIntosh et al., 1962), and as variations in scholastic status between children attending the different schools are not a major concern of this inquiry, scaling techniques were utilised to ensure uniformity of assessment across schools. The resulting adjusted scores thus provided a more adequate basis for examining the relationships between scholastic status and other variables examined in the study, as they removed possible confounding effects of school-based differences. The scores of the Bega children were taken as the standard and the scaling technique that was employed followed the procedure described by McIntosh, Walker and Mackay (1962, pp.41-43).

The statistics used in the analyses of differences relating to scholastic status and to locus-of-control orientation were the t-test and one-way analysis of variance (Mendenhall and Ramey, 1973).

As no standardised scores exist for the Nixon or the I & P Matrices Tests, and as some doubt exists concerning the applicability of American norms to the performance of Australian subjects on several ITPA subtests, including the AA and VE (Teasdale and Wray, 1975; Teasdale et al., 1978; Teasdale and de Vries, 1976), raw scores formed the primary basis of the analyses of differences relating to these measures. Similarly, in the absence of normative Australian studies, and for the sake of consistency, raw scores of the PPVT also

were included in the analyses. The effects of age on test performance were controlled statistically in comparisons by using the analysis of covariance technique (Press, 1972). Nevertheless, as the question of the applicability of United States norms on the language tests to the performance of Australian children is yet to be resolved fully (Elkins, 1974, 1976), and to facilitate comparisons between the results of this study and those of earlier Australian studies in which the same tests were used, but for which analyses were based primarily on standardised scores (Teasdale and de Vries, 1976), means and standard deviations of the standardised scores of each age group on the language tests also are included in the Tables.

Unlike the above-mentioned scales, absenteeism and culture of poverty scale (CPS) scores were not thought to be amenable to parametric analysis. The measure employed in the determination of absenteeism - the number of days absent during Term Two - does qualify as an interval scale, but other assumptions associated with the Central Limit Theorem (Hays, 1970) which underlie parametric analyses, were thought not to be justified. It is unlikely that a large number of random influences operate to determine absentee rates. Consequently, 'days absent' frequencies are unlikely to be normally distributed in each comparison group. In addition, in view of both the heterogeneity of the Aboriginal population, and the high absentee rates of many Aboriginal children, equivalence of variances between both groups in Aboriginal-White comparisons is unlikely.

Similar arguments apply to CPS scores. Since the scale attempts to reflect accurately the ingredients and emphases of Lewis' model, its content validity and scoring may entitle it to the status of an interval scale in the broader social science interpretation of such scales. But the assumptions of normal distribution and equal

variance of the scores it generates for each comparison group may not be justified, especially if the comparisons are between Aborigines and Whites. As the concept upon which the scale is based is applicable mainly to groups such as Aborigines, it is likely that they will share more of its defining attributes than will the White control group, but the distribution of these traits is uncertain for either group. The heterogeneity of the Aboriginal population, for example, suggests that they may display a wider range of such attributes than does the White group. Application of the Kolgomorov-Smirnov Test of Good Fit (Siegel, 1956) to the sample scores on the CPS and to absentee rates supported these conclusions by revealing significant differences between the actual distribution of these scores for the various comparison groups and theoretical normal distributions of them. Analyses of differences relating both to absenteeism and CPS scores, therefore, were based on the non-parametric Mann-Whitney U-Test and Kruskal-Wallis one-way analysis of variance procedure (Siegel, 1956), depending on whether two, or more than two, groups were included in the comparisons.

In common with the practice usual in the social sciences, findings were considered significant when the probability of making a Type I error (α) was equal to or less than 0.054. As this level of significance is somewhat arbitrary, differences approximating it (i.e. from 0.055 to 0.094) also are recorded in the Tables (in brackets). All significance levels are recorded accurately up to the third decimal point. Non-significant results are indicated as N.S. if included in a Table with significant findings. As the Aboriginal sample comprises virtually the entire Aboriginal school population in the area aged approximately six to ten years, the internal differences between them closely represent actual differences for the South Coast population. Significance levels accompanying such comparisons, therefore, refer only to

how well the results generalise to 'high-contact' Aborigines elsewhere. Thus, marked differences emerging from these comparisons are noted in the text accompanying the appropriate Tables, even if they do not achieve (or approach) criterial significance. As the White sample represents only a small portion of the total low-socioeconomic White children on the Far South Coast, no similar comments are included regarding them.

7.3 SCHOLASTIC STATUS AND ABSENTEEISM

The analyses of differences relating to scholastic status are presented in Tables 7.2 to 7.4. As noted in Chapter 5, scholastic status incorporates gauges both of academic skills and of scholastic application. The academic skill component is subdivided into teacher rating of number and reading skills. For convenience, and because of its direct relevance to the amount of schooling received by subjects in the study, analyses of differences relating to absentee rates also are included in this section. They are presented in Tables 7.5 to 7.8.

7.3.1 Scholastic Status: Aborigines versus Whites

A summary of the results of comparisons between teacher ratings of the scholastic status of Aboriginal and White children, based on the t-test, are presented in Table 7.2. Comparisons of the results for males and females of each ethnic group are considered separately as well as together. The Table includes the number of subjects in each comparison group, the mean and standard deviation of the adjusted teacher rating scores, the associated t-value and its level of significance.

TABLE 7.2
SCHOLASTIC STATUS: ABORIGINES VS WHITES

Comparison Group	Teacher Ratings	Aboriginal			White			t Value	Signif.
		N	\bar{X}	S.D.	N	\bar{X}	S.D.		
Total	Number	55	2.096	0.864	56	2.926	1.094	-4.44	.000
	Reading	55	2.348	0.914	56	3.093	1.294	-3.50	.001
	Applcn.	55	3.224	0.807	56	3.493	0.854	-1.70	(.092)
Male	Number	28	2.171	1.009	29	2.593	0.947	-1.63	N.S.
	Reading	28	2.384	1.050	29	2.644	1.114	-0.91	N.S.
	Applcn.	28	3.095	0.881	29	3.220	0.801	-0.56	N.S.
Female	Number	27	2.018	0.693	27	3.283	1.145	-4.91	.000
	Reading	27	2.311	0.765	27	3.574	1.319	-4.31	.000
	Applcn.	27	3.358	0.713	27	3.785	0.824	-2.03	.047

The analyses summarised in Table 7.2 reveal significant differences in teacher ratings of the number and reading skills of Aboriginal and White children when both sexes are considered together. Inspection of the means for each group show that these differences favour the White group. Closer inspection reveals, however, that most of these differences can be attributed to the gap in ability ratings between the Aborigines females and the White females. Hence, although inspection of the means indicates that the school performance of White males in both academic areas tends to be regarded more highly than that of Aboriginal males, the difference between them is not significant. For the females, however, the differences are highly significant.

A similar though weaker trend is evident in the ratings of the scholastic application of both groups. While no significant difference occurs between Aboriginal, and White, males, there is a significant difference between Aboriginal, and White, females, favouring the latter. This difference is too weak, however, to show up as significant when both sexes are considered together, though it still approaches significance.

7.3.2 Scholastic Status: Males versus Females

Table 7.3 also incorporates comparisons of scholastic status based on t-tests. In this case, however, male-female differences form the basis of the comparisons, and the results for both ethnic groups are considered separately and together. The statistics included in the Table are the same as for Table 7.2 and, again, the adjusted teacher rating scores form the basis of the analyses.

TABLE 7.3
SCHOLASTIC STATUS: MALES VS FEMALES

Comparison Group	Teacher Ratings	Males			Females			t Value	Signif.
		N	\bar{X}	S.D.	N	\bar{X}	S.D.		
Total	Number	57	2.386	0.992	54	2.651	1.134	-1.31	N.S.
	Reading	57	2.516	1.081	54	2.943	1.244	-1.93	(.057)
	Applcn.	57	3.159	0.836	54	3.572	0.793	-2.67	.009
Aboriginal	Number	28	2.171	1.009	27	2.018	0.693	0.65	N.S.
	Reading	28	2.384	1.050	27	2.311	0.765	0.29	N.S.
	Applcn.	28	3.095	0.881	27	3.358	0.713	-1.21	N.S.
White	Number	29	2.593	0.947	27	3.283	1.145	-2.46	.017
	Reading	29	2.644	1.114	27	3.575	1.319	-2.86	.006
	Applcn.	29	3.220	0.801	27	3.785	0.824	-2.60	.012

The results presented in Table 7.3 demonstrate that White females received significantly higher ratings than White males on each of the three dimensions of scholastic status. No significant differences occur, however, between Aboriginal males and females on any of the scales, although there is a trend for the scholastic application of females to be rated more highly. When both ethnic groups are combined, the superior ratings of the scholastic application of the White females, together with the trend in that direction for the Aboriginal females, coalesce to produce a significant difference between the combined male and female samples in their application ratings. For ratings of reading ability, the difference between the combined male and female samples approaches significance, while no significant difference occurs between them in ratings of their number abilities.

7.3.3 Scholastic Status: Age Group Comparisons

Table 7.4 presents a summary of scholastic status comparisons between age groups for each ethnic group considered separately and together, based on one-way analysis of variance procedures. The number in each comparison group, the mean and standard deviation of their respective (adjusted) ratings, the corresponding F value and its level of significance, are included in the Table.

TABLE 7.4

SCHOLASTIC STATUS: AGE GROUP COMPARISONS

Comparison Group	Teacher Ratings	6yrs			7yrs			8yrs			9yrs			10yrs			F Value	Signif.
		N	\bar{X}	S.D.	N	\bar{X}	S.D.	N	\bar{X}	S.D.	N	\bar{X}	S.D.	N	\bar{X}	S.D.		
Total	Number	27	2.799	0.997	18	2.174	0.987	16	2.335	0.962	26	2.537	1.223	24	2.544	1.079	1.058	N.S.
	Reading	27	3.049	1.113	18	2.116	0.993	16	2.731	1.302	26	2.830	1.118	24	2.695	1.269	1.823	N.S.
	Applcn.	27	3.446	0.718	18	3.149	0.917	16	3.214	0.986	26	3.553	0.845	24	3.308	0.799	0.841	N.S.
Aboriginal	Number	13	2.513	0.682	9	2.142	0.889	8	1.582	0.570	13	1.973	0.979	12	2.084	0.954	1.608	N.S.
	Reading	13	2.669	0.706	9	2.092	0.903	8	1.775	0.758	13	2.696	0.919	12	2.199	1.045	2.067	N.S.
	Applcn.	13	3.100	0.638	9	3.236	0.721	8	2.677	1.031	13	3.695	0.680	12	3.205	0.833	2.311	(0.071)
White	Number	14	2.926	1.184	9	3.065	1.130	8	3.091	0.599	13	3.101	1.211	12	3.004	1.030	1.189	N.S.
	Reading	14	3.402	1.318	9	2.139	1.131	8	3.688	0.984	13	2.964	1.312	12	3.191	1.319	2.037	N.S.
	Applcn.	14	3.766	0.652	9	3.062	1.119	8	3.752	0.600	13	3.411	0.992	12	3.411	0.786	1.188	N.S.

Inspection of the means for each group shows some variation between them, and in particular, a trend for Aboriginal eight-year-olds to receive lower ratings on each index than the other Aboriginal groups, and for White seven-year-olds to receive a notably lower rating of reading ability than the other White groups. But the only index for which variations approach significance is the rating of Aboriginal scholastic application. No other differences even approach significance, perhaps reflecting the small numbers in many of the comparison groups.

7.3.4 Absenteeism: Aborigines versus Whites

Table 7.5 summarises the analyses of differences between the absentee rates of the Aboriginal and White samples, based on the Mann-Whitney U statistic. The Table includes the numbers in each comparison group, their mean rank, the corresponding Mann-Whitney U-value and its significance level. In addition, as 'days absent' represent an interval scale, the mean number of days absent also is included for each group, to give an indication of actual differences, as distinct from ranked differences, between comparison groups; it is placed in brackets, adjacent to the mean rank for each group.

TABLE 7.5
ABSENTEEISM: ABORIGINES VS WHITES

Comparison Group	Aboriginal			White			U Value	Signif.
	N	Mean Rank	(\bar{X})	N	Mean Rank	(\bar{X})		
Total	55	72.75	(12.76)	54	36.92	(3.92)	508.5	.000
Male	28	35.90	(10.64)	29	22.53	(4.78)	218.5	.003
Female	27	37.09	(14.96)	25	15.00	(2.92)	51.5	.000

Differences between both groups are highly significant, regardless of whether the sexes are considered separately or combined. High rates of absenteeism clearly are a characteristic of the Aboriginal pupils, regardless of their sex.

7.3.5. Absenteeism: Males versus Females

Male/female differences in absentee rates are summarised in Table 7.6. Again, the analysis was based on the Mann-Whitney U statistic. The format of the Table follows that of Table 7.5

TABLE 7.6
ABSENTEEISM: MALES VS FEMALES

Comparison Group	Male			Female			U Value	Signif.
	N	Mean Rank	(\bar{X})	N	Mean Rank	(\bar{X})		
Total	57	53.54	(7.66)	52	56.60	(9.29)	1399.0	N.S.
Aboriginal	28	24.05	(10.64)	27	32.09	(14.96)	267.5	(0.063)
White	29	30.17	(4.78)	25	24.40	(2.92)	285.0	N.S.

There is a trend for White males to have higher absentee rates than White females, but the difference is not significant. The trend is in the opposite direction for the Aborigines, with the females tending to have higher absentee rates than the males, but again the difference fails to reach criterial significance (although it does approach it). When both groups are combined, the opposing trends have the effect of partially cancelling each other out.

7.3.6 Absenteeism: School-based Comparisons

Variations in absentee rates of children attending each of the three schools in the study are summarised in Table 7.7. The differences were analysed using the Kruskal-Wallis one-way analysis of variance procedure and the Table includes the numbers in each comparison group, their mean rank, a Chi-square value corrected for ties and its accompanying levels of significance. As with the previous two Tables, the mean number of days absent for each group also is included in the Table to give a more accurate indication of actual differences between the groups.

Inspection of Table 7.7 reveals that, whereas the Eden Aboriginal children have higher absentee rates than the other Aboriginal children, the Eden White children have the lowest absentee rate of the White groups. The differences are significant, however, only for the White groups.

7.3.7 Absenteeism: Age Group Comparisons

The analyses of age group variations in absentee rates, again based on the Kruskal-Wallis one-way analysis of variance procedure, are summarised in Table 7.8. The format is similar to that of Table 7.7.

Rates of absenteeism peak for the seven-year-olds for each ethnic group and decline somewhat thereafter for the Aboriginal group, but neither of these trends achieves statistical significance. However, as we shall see later in the Chapter, a negative correlation between age and absenteeism for the Aboriginal group does achieve significance (Table 7.21).

TABLE 7.7

ABSENTEEISM: SCHOOL-BASED COMPARISONS

Comparison Group	Bermagui			Eden			Bega			Chi Sq.	Signif.
	N	Mean R.	(\bar{X})	N	Mean R.	(\bar{X})	N	Mean R.	(\bar{X})		
Total	35	61.90	(8.90)	40	50.19	(8.51)	34	53.56	(7.69)	2.66	N.S.
Aboriginal	19	28.24	(11.92)	19	30.50	(15.03)	17	24.94	(11.18)	1.09	N.S.
White	16	32.62	(5.31)	21	20.57	(2.62)	17	31.24	(4.21)	6.73	.035

TABLE 7.8

ABSENTEEISM: AGE GROUP COMPARISONS

Comparison Group	6yrs			7yrs			8yrs			9yrs			10yrs			Chi Sq.	Signif.
	N	Mean R.	(\bar{X})	N	Mean R.	(\bar{X})	N	Mean R.	(\bar{X})	N	Mean R.	(\bar{X})	N	Mean R.	(\bar{X})		
Total	27	54.69	(8.69)	16	65.72	(11.81)	16	56.41	(9.56)	26	53.56	(7.67)	24	48.83	(5.73)	2.84	N.S.
Aboriginal	13	30.15	(13.84)	9	33.78	(16.44)	8	31.87	(15.69)	13	27.96	(12.42)	12	18.79	(7.25)	5.83	N.S.
White	14	27.71	(3.89)	7	32.07	(5.86)	8	23.25	(3.44)	13	26.77	(2.92)	12	28.21	(4.21)	1.23	N.S.

7.4 LANGUAGE AND COGNITION

The analyses of differences relating to language and cognition are presented in Tables 7.9 to 7.12. As noted previously, Australian norms for the language and cognitive measures used in the study are unavailable and United States norms for some ITPA subtests, including Auditory Association and Verbal Expression, may be inappropriate for Australian studies. Hence, as previously noted, significance testing was based on raw scores, using the analysis of covariance technique in which the effects of age were held constant. This assumed relationship between the raw scores of subjects on each of the tests and their age was checked, using Pearson's product-moment correlational procedures and was found to be significant at the 0.01 level for the scores of both ethnic groups on each test, except in one instance - the Nixon Test scores of the White children. In this case the correlation was still significant, but only at the 0.05 level.⁽¹⁾

Although some uncertainty accompanies their use, means and standard deviations of standardised scores for the PPVT, AA and VE tests also are presented for two reasons. First, as noted in the Introduction to this Chapter, including them facilitates comparisons with earlier studies of similar groups, most of which include analyses based on standardised scores. Second, they provide a more appropriate indication of the direction of trends across comparison groups, some of which include several unequally represented age groups, than do means and standard deviations of raw scores. Thus, although the inference may not be justified that these scores indicate how well the subjects in the study performed on the tests, relative to the average

(1) These correlations are presented later in the Chapter (see Table 7.21).

performance of Australian children, the scores are useful both for examining trends internal to the study, and for drawing comparisons with similar children in other studies.

In the absence of published standardised scores for the Nixon and Matrices Tests, means and standard deviations based on scores statistically corrected for the influence of age were included in the Tables to serve as an indication of the direction of trends across comparison groups for scores on each of the two tests. The effects of age were removed using simple regression procedures. The means and standard deviations were then calculated from the ensuing standardised residual scores (which have mean = 0 and standard deviation = 1.0).

Thus each Table (except 7.12) summarising the results of comparisons based on language and cognitive test scores consists of two sections. The first includes the numbers of subjects in each comparison group, together with means and standard deviations of standardised scores (based on United States norms) for the language tests, and of standardised residual scores following the removal of age effects, for the cognitive tests. The second part of the Tables includes F-values and significance levels based on covariance analyses of raw scores, as this procedure was thought to be more appropriate and more efficient as a means of testing for the significance of differences between the performances of comparison groups on each gauge.

Table 7.12 includes an analysis of variance, rather than of covariance, as trends across age groups form the basis of comparisons. As already noted, the relationships between raw scores on each gauge and age were examined, using correlational procedures. Hence, the analysis reported in this Table concentrates only on trends for the language tests, based on standardised scores. Until the question of

the applicability of these scores to Australian children has been resolved, however, considerable caution is required in the interpretation of these trends. Since the standardised residual scores of the cognitive gauges were computed on the basis of the age of the subjects in the study, they were not included in these Tables. The sequence of comparative analyses relating to language and cognition follows that for absenteeism.

7.4.1 Language and Classification: Aborigines versus Whites

Table 7.9 summarises racial differences in test scores. Both sexes are considered together and separately.

Inspection of Table 7.9 reveals that the performance of the White children on all tests except for the Nixon is significantly superior to the performance of the Aboriginal children. This is true for both sexes. With one exception, these differences are significant well beyond the 0.01 level. The exception concerns the comparison between Aboriginal and White males on the VE, which, nevertheless, is still highly significant ($p = 0.018$). Despite a trend which favours the White group, no significant difference is evident for the Nixon Test results; though the difference approaches significance ($p = 0.88$) when both sexes are combined.

7.4.2 Language and Classification: Males versus Females

Table 7.10 follows the format of Table 7.9, except that sex rather than race forms the basis of the comparisons. Male-female differences are explored within each racial group, as well as more generally when both racial groups are combined.

TABLE 7.9
LANGUAGE AND CLASSIFICATION: ABORIGINES VS WHITES

Comparison Group	Scale	Aboriginal			White			Cov. Raw Sc. with age	
		N	Mean (S.S.)	S.D.	N	Mean (S.S.)	S.D.	F Value	Signif.
Total	PPVT	55	85.69	9.32	56	95.82	11.10	31.469	.000
	AA	55	29.08	7.05	56	37.34	6.57	12.711	.000
	VE	55	30.29	5.25	56	33.68	6.03	5.059	.001
	NIX	22	- .254	.854	23	.243	.961	3.058	(.088)
	MAT	33	- .520	.768	33	.520	.676	37.076	.000
Male	PPVT	28	89.32	9.93	29	96.24	11.87	8.433	.005
	AA	28	29.79	7.66	29	37.24	7.02	15.953	.000
	VE	28	30.79	6.10	29	33.59	5.80	5.991	.018
	NIX	11	- .274	.845	12	.208	1.144	1.214	NS
	MAT	17	- .670	.822	17	.378	.566	18.613	.000
Female	PPVT	27	81.93	7.01	27	95.37	10.42	33.411	.000
	AA	27	28.33	6.43	27	37.44	6.19	34.523	.000
	VE	27	29.78	4.24	27	33.78	6.38	8.943	.004
	NIX	11	- .234	.905	11	.281	.768	2.038	NS
	MAT	16	- .362	.696	16	.672	.764	17.416	.000

TABLE 7.10
LANGUAGE AND CLASSIFICATION: MALES VS FEMALES

Comparison Group	Scale	Aboriginal			White			Cov. Raw Sc. with age	
		N	Mean (S.S.)	S.D.	N	Mean (S.S.)	S.D.	F Value	Signif.
Total	PPVT	57	92.84	11.41	54	88.64	11.10	6.091	.015
	AA	57	33.58	8.19	54	32.89	7.57	0.834	NS
	VE	57	32.21	6.06	54	31.78	5.73	1.261	NS
	NIX	23	-.023	1.019	22	.024	.860	0.111	NS
	MAT	34	-.146	.875	32	.155	.891	4.906	.031
Aboriginal	PPVT	28	89.32	9.93	27	81.93	7.01	8.901	.004
	AA	28	29.79	7.67	27	28.33	6.43	1.355	NS
	VE	28	30.79	6.10	27	29.78	4.24	0.341	NS
	NIX	11	-.274	.845	11	-.234	.905	0.489	NS
	MAT	17	-.670	.822	16	-.632	.696	2.747	NS
White	PPVT	29	96.24	11.87	27	95.37	10.42	0.669	NS
	AA	29	37.24	7.02	27	37.44	6.19	0.082	NS
	VE	29	33.59	5.80	27	33.78	6.38	0.178	NS
	NIX	12	.208	1.144	11	.281	.768	0.109	NS
	MAT	17	.378	.566	16	.672	.764	2.015	NS

The results presented in Table 7.10 show a highly significant difference between the PPVT raw scores of Aboriginal males and Aboriginal females, which also is reflected in the significant difference between males and females when both racial groups are combined. Inspection of the mean standardised scores reveals that this difference favours the Aboriginal males.

There also is a trend for the females in each ethnic group to perform better on the Matrices Test than do the males. But the differences attain significance only when both groups are combined. No other significant differences or consistent trends are evident.

7.4.3 Language and Classification: School-based Comparisons

Table 7.11 presents the results of comparisons between children attending Bermagui, Eden and Bega primary schools. Again, both racial groups are considered separately and together.

With the exception of the AA scores of the White children, there is a general trend towards improving language test performance for each ethnic group from Bermagui to Eden to Bega. But only two of these trends attain criterial significance. These are for the AA and VE scores of the Aboriginal children (both at the 0.05 level).

Close to significant differences also occur between the scores of the Aboriginal children attending the different schools on both classificatory tests. Again, the Bermagui children do less well than do the other two groups, but unlike the case with the language tests, the Eden children, rather than the Bega children, perform best. A reverse trend is evident for the Nixon scores of the White children, but it

TABLE 7.11

LANGUAGE AND CLASSIFICATION: BERMAGUI VS EDEN VS BEGA

Comparison Group	Scale	Bermagui			Eden			Bega			Cov. Raw Sc. with age	
		N	Mean (S.S.)	S.D.	N	Mean (S.S.)	S.D.	N	Mean (S.S.)	S.D.	F Value	Signif.
Total	PPVT	37	89.78	10.79	40	90.33	10.76	34	92.48	12.88	1.021	NS
	AA	37	32.32	9.36	40	32.75	7.81	34	34.82	6.27	0.834	NS
	VE	37	30.81	5.47	40	31.93	4.93	34	33.38	7.09	0.004	NS
	NIX	15	-.191	.917	14	.006	1.042	16	.174	.876	0.573	NS
	MAT	22	-.225	.965	26	.148	.871	18	.061	.807	2.623	(.081)
Aborig.	PPVT	19	84.89	6.73	19	85.11	8.69	17	87.24	12.40	0.700	NS
	AA	19	26.37	7.12	19	29.47	7.78	17	31.65	5.18	3.202	.049
	VE	19	28.89	4.58	19	29.89	5.26	17	32.29	5.60	3.097	.054
	NIX	8	-.805	.724	6	.190	.998	8	-.036	.620	3.308	(.061)
	MAT	11	-.915	.598	13	-.265	.792	9	-.408	.797	3.158	(.058)
Whites	PPVT	18	94.94	11.98	21	95.05	10.41	17	97.06	11.41	0.407	NS
	AA	18	38.61	7.11	21	35.71	6.72	17	38.00	5.72	0.768	NS
	VE	18	32.83	5.72	21	33.76	3.88	17	34.47	8.35	0.553	NS
	NIX	7	.511	.524	8	-.133	1.120	8	.384	1.076	0.910	NS
	MAT	11	.465	.742	13	.561	.765	9	.530	.503	0.247	NS

fails even to approach criterial significance. Nevertheless, it has a cancelling effect when both groups are combined. No notable differences occur between the White groups on the Matrices Test. The close to significant difference that occurs when both groups are combined, therefore, reflects the differences between the Aboriginal groups noted above.

7.4.4 Language: Age Group Comparisons

Table 7.12 summarises the results of an analysis of variance, based on standardised scores in which age groups are compared. As has been noted, age-normed standardisation scores are not available for the two classificatory tests, and age group comparisons based on the (age corrected) residual scores for these tests are meaningless. The Table, therefore, includes results only for the language tests. Following the pattern of earlier Tables, the results for both racial groups are considered together and separately.

A significant decline in performance on the VE appears evident for both racial groups. A less consistent decline with age in the performance of the Aboriginal children on the AA also approaches significance ($p = 0.067$). No other trends are evident.

7.5 CULTURE AND PERSONALITY

As non-parametric procedures were used in the analysis of differences relating to culture of poverty scale (CPS) scores, and as parametric procedures were used in the analysis of differences relating to scores on the two locus-of-control scales, both sets of results are presented in separate Tables. Results relating to the CPS are

TABLE 7.12

LANGUAGE: AGE GROUP COMPARISONS

Comparison Group	Scale	N	6yrs Mean (S.S.)	S.D.	N	7yrs Mean (S.S.)	S.D.	N	8yrs Mean (S.S.)	S.D.	N	9yrs Mean (S.S.)	S.D.	N	10yrs Mean (S.S.)	S.D.	F.Value	Signif.
Total	PPVT	27	94.89	11.35	18	89.83	6.90	16	86.50	7.19	26	90.23	13.35	24	90.42	13.44	1.52	NS
	AA	27	34.78	7.95	18	35.83	8.12	16	33.00	8.39	26	32.12	6.33	24	30.96	8.83	1.38	NS
	VE	27	36.48	6.56	18	33.83	5.98	16	31.31	3.74	26	30.00	4.78	24	28.21	3.20	10.24	.000
Aborig.	PPVT	13	88.30	6.82	9	87.00	5.74	8	83.75	4.89	13	86.08	14.48	12	82.75	9.28	0.67	NS
	AA	13	30.92	7.03	9	33.33	7.63	8	27.25	5.12	13	29.08	6.82	12	25.08	6.47	2.34	(.067)
	VE	13	34.77	6.11	9	31.67	4.80	8	29.38	1.41	13	28.69	4.82	12	26.75	2.90	5.75	.001
Whites	PPVT	14	101.00	11.45	9	92.67	7.09	8	89.25	8.38	13	94.38	11.14	12	98.08	12.77	1.95	NS
	AA	14	38.36	7.22	9	38.33	8.23	8	38.75	7.01	13	35.15	4.12	12	36.83	6.78	0.59	NS
	VE	14	38.07	6.78	9	36.00	6.52	8	33.25	4.40	13	31.31	4.55	12	29.67	2.87	5.30	.001

presented in Tables 7.13 to 7.16, and results relating to the locus-of-control scales are presented in Tables 7.17 to 7.20. Both sets of Tables follow the sequence of presentation used in the preceding two sections.

7.5.1 Culture of Poverty: Aborigines versus Whites

Table 7.13 presents results relating to Aboriginal-White comparisons on the CPS, with both sexes considered separately and together. The statistic upon which the analysis is based is the Mann-Whitney U-test. As with absentee rates, means of CPS scores are included in brackets adjacent to mean ranks as an indication of the actual difference, as opposed to ranked difference between comparison groups.

TABLE 7.13
CULTURE OF POVERTY: ABORIGINES VS WHITES

Comparison Group	Aboriginal			White			M-W U Value	Signif. Level
	N	Mean	Rank (\bar{X})	N	Mean	Rank (\bar{X})		
Total	37	52.23	(22.88)	34	18.34	(7.88)	28.5	.000
Male	19	25.85	(22.47)	16	8.66	(7.75)	2.5	.000
Female	18	26.97	(23.33)	18	10.03	(8.00)	9.5	.000

Results demonstrate highly significant differences between the scores of Aborigines and Whites, regardless of their sex.

7.5.2 Culture of Poverty: Males versus Females

Table 7.14 presents the findings of a comparative analysis of the CPS scores of males and females. Again, the Mann-Whitney U-test forms the basis of comparisons, with both ethnic groups considered separately and together. The contents of the Table follow the pattern of Table 7.13

TABLE 7.14
CULTURE OF POVERTY: MALES VS FEMALES

Comparison Group	Male		Female		M-W U Value	Signif. Level
	N	Mean Rank (\bar{X})	N	Mean Rank (\bar{X})		
Total	35	35.96 (15.74)	36	36.04 (15.67)	628.5	NS
Aboriginal	19	17.50 (22.47)	18	20.58 (23.33)	142.5	NS
White	16	18.28 (7.75)	18	16.81 (8.00)	131.5	NS

No significant difference was found between the scores of males and females for either group.

7.5.3 Culture of Poverty: School-based Comparisons

Results of the testing for differences in CPS scores of the families of children attending each of the three schools in the study are summarised in Table 7.15.

The statistical procedure adopted was the Kruskal-Wallis one-way analysis of variance and the Table includes the number in each comparison group, their mean rank (accompanied by the actual mean in brackets), the Chi-square value, and its levels of significance.

TABLE 7.15

CULTURE OF POVERTY: BERMAGUI VS EDEN VS BEGA

Comparison Group	Bermague			Eden			Bega			Chi Sq.	Signif. Level
	N	Mean Rank	(\bar{X})	N	Mean Rank	(\bar{X})	N	Mean Rank	(\bar{X})		
Total	21	27.50	(12.19)	26	37.62	(16.69)	24	41.69	(17.71)	5.54	(.063)
Aboriginal	6	15.92	(22.17)	16	14.72	(21.31)	15	24.80	(24.87)	7.30	.026
White	15	17.53	(8.20)	10	21.10	(9.30)	9	13.44	(5.78)	2.80	NS

TABLE 7.16

CULTURE OF POVERTY: AGE GROUP COMPARISONS

Comparison Group	6yrs			7yrs			8yrs			9yrs			10yrs			Chi Sq.	Signif. Level
	N	Mean Rank	(X)	N	Mean Rank	(X)	N	Mean Rank	(X)	N	Mean Rank	(X)	N	Mean Rank	(X)		
Total	19	35.42	(15.32)	13	30.58	(14.23)	8	36.56	(15.50)	16	41.31	(17.81)	15	35.47	(15.33)	1.98	NS
Aboriginal	9	21.44	(24.00)	5	13.20	(21.80)	4	20.62	(24.00)	9	23.44	(24.67)	10	15.05	(24.40)	4.83	NS
White	10	17.55	(7.50)	8	19.50	(9.50)	4	18.75	(7.00)	7	18.79	(9.00)	5	11.40	(5.20)	2.38	NS

Results show a significant difference between the CPS scores of the families of the Aboriginal children attending each of the schools. Bega families generally score highest of the three groups on the scale, and Eden families score the lowest. Although not significant, a reversal of this trend is evident for the families of White children, with the Bega families scoring lower than the other two groups, and Eden families scoring higher. The especially low sample number in the Bermagui Aboriginal group reflects the limited number of Wallaga Lake residents that were available for interview (and, as will be discussed in Chapter 8, may have artificially depressed their average score).

7.5.4 Culture of Poverty: Age Group Comparisons

Age group comparisons of CPS scores are presented in Table 7.16. Again, the analyses are based on the Kruskal-Wallis one-way analysis of variance. The format of the Table follows that of Table 7.15.

No significant differences were found between any of the groups, nor were any consistent trends evident.

7.5.5 Locus-of-Control Orientation: Aborigines versus Whites

The analysis of racial differences in locus-of-control orientation is summarised in Table 7.17. The significance of these differences was tested, using the t-test.

TABLE 7.17
LOCUS-OF-CONTROL ORIENTATION: ABORIGINES VS WHITES

Comparison Group	Scale	Aboriginal			White			t Value	Signif. Level
		N	\bar{X}	S.D.	N	\bar{X}	S.D.		
Total	PPNS	27	12.15	2.41	31	12.81	2.46	-1.03	NS
	CNS	23	11.04	2.74	25	10.56	3.04	0.57	NS
Male	PPNS	14	11.07	2.37	16	12.50	1.83	-1.86	(.073)
	CNS	12	11.58	2.39	13	11.85	3.05	-0.24	NS
Female	PPNS	13	13.31	1.93	15	13.13	3.02	0.18	NS
	CNS	11	10.46	3.08	12	9.17	2.44	1.12	NS

Although no differences were significant, there was a trend for White males to be more externally orientated than Aboriginal males on the PPNS ($p = 0.073$) and for Aboriginal females to be more external than White females on the CNS.

7.5.6 Locus-of-Control Orientation: Males versus Females

Table 7.18 contains the results of male/female comparisons, also based on the t-test.

TABLE 7.18
LOCUS-OF-CONTROL ORIENTATION: MALES VS FEMALES

Comparison Group	Scale	N	Male		N	Female		t Value	Signif. Level
			\bar{X}	S.D.		\bar{X}	S.D.		
Total	PPNS	30	11.83	2.18	28	13.21	2.53	-2.23	.030
	CNS	25	11.72	2.70	23	9.78	2.78	2.45	.018
Aboriginal	PPNS	14	11.071	2.37	13	13.31	1.93	-2.68	.013
	CNS	12	11.58	2.39	11	10.46	3.08	0.99	NS
White	PPNS	16	12.50	1.83	15	13.13	3.02	-0.71	NS
	CNS	13	11.85	3.05	12	9.17	2.44	2.41	.023

Conflicting trends appear evident for each test. On the CNS, males tend to exhibit higher externality than females. Although significant only for the White sample, this trend also is evident for the Aboriginal children, and is strong enough to maintain significance when both groups are considered together. But a reverse trend occurs for the PPNS. Females of both ethnic groups tend to exhibit higher externality than the males. The difference reaches significance for the Aboriginal sample and when both racial groups are combined, but not for the White sample.

7.5.7 Locus-of-Control Orientation: School-based Comparisons

The comparative performance of children attending each of the three schools included in the study was analysed, using the analysis of variance procedure. The results are reported in Table 7.19.

No significant differences occur, and performance on each scale varies little from one school group to the other, regardless of whether each ethnic group is considered separately or together.

7.5.8 Locus-of-Control Orientation: Age Group Comparisons

Analysis of variance procedures also were used to compare the performance of children from different age groups. The results are presented in Table 7.20.

Again, no differences were significant and no notable trend, other than the consistency of performance across age groups for each measure, is evident.

TABLE 7.19

LOCUS-OF-CONTROL ORIENTATION: BERMAGUI VS EDEN VS BEGA

Comparison Group	Scale	Bermagui			Eden			Bega			F Value	Signif. Level
		N	\bar{X}	S.D.	N	\bar{X}	S.D.	N	\bar{X}	S.D.		
Total	PPNS	19	12.63	2.67	21	12.52	2.38	18	12.33	2.38	1.135	NS
	CNS	15	11.27	2.96	18	10.39	2.66	15	10.80	3.17	0.370	NS
Aboriginal	PPNS	9	11.44	1.67	9	12.56	2.65	9	12.44	2.88	0.559	NS
	CNS	7	11.71	2.69	9	10.00	2.06	7	11.71	3.45	1.082	NS
White	PPNS	10	13.70	3.02	12	12.50	2.28	9	12.22	1.92	1.011	NS
	CNS	8	10.87	3.14	9	10.78	3.23	8	10.00	2.88	0.188	NS

TABLE 7.20

LOCUS-OF-CONTROL ORIENTATION: AGE GROUP COMPARISONS

Comparison Group	Scale	6yrs			7yrs			8yrs			9yrs			10yrs			F Value	Signif. Level
		N	\bar{X}	S.D.	N	\bar{X}	S.D.	N	\bar{X}	S.D.	N	\bar{X}	S.D.	N	\bar{X}	S.D.		
Total	PPNS	25	12.16	2.36	18	13.22	2.46	15	12.20	2.51							1.154	NS
	CNS										24	10.54	2.78	24	11.04	3.01	0.357	NS
Aboriginal	PPNS	11	11.91	2.26	9	13.00	2.29	7	11.43	2.82							0.920	NS
	CNS										11	10.73	2.58	12	11.33	2.96	0.272	NS
White	PPNS	14	12.36	2.50	9	13.44	2.74	8	12.86	2.17							0.524	NS
	CNS										13	10.38	3.04	12	10.75	3.17	0.087	NS

7.6 SECTION 2: INTERACTIONS

As noted in the Introduction to this Chapter, an attempt was made to explore more fully the nature of the findings for each ethnic group by including an examination of the interrelationships between variables for each ethnic group, as well as an examination of differences between comparison groups on each variable. Hence, following an initial examination of trends associated with age and with absenteeism, the analysis of 'interactions' presented below focuses first on scholastic status and associated variables, then on variables (other than scholastic status) related to language and classificatory performance and, finally, on the interrelationships between scores on the locus-of-control measures and those on the culture of poverty scale for each ethnic group. The analyses are based on Spearman rank order and partial correlation procedures (Nie et al., 1975), and are presented in Tables 7.21 to 7.34.

The restricted age range of some measures, and the nature of the relationships under investigation, inhibited the application of more complex multivariate procedures to an analysis of trends for the entire sample. But multiple regression procedures were appropriate for an investigation of trends within restricted age ranges. In particular, this procedure enabled an examination of possible changes with age in the relative importance of different variables to the scholastic status of each racial group. These results are presented in Tables 7.35 to 7.37.

7.7 AGE AND RELATED VARIABLES

Spearman correlation coefficients for age (in months) and related variables, their accompanying levels of significance, and the numbers of subjects involved in their calculation, are presented in Table 7.21 for each ethnic group. Only those correlations with an accompanying significance level that 'approaches criterial significance' (i.e. $0.094 \geq p \geq 0.055$), or achieves it (i.e. $p \leq 0.054$), are included in the Table.

TABLE 7.21
AGE AND RELATED VARIABLES

Var.	Related Var.	Aboriginal			Related Var.	White		
		N	r	Signif.		N	r	Signif.
Age	DA	55	-.26	.029	PPVT	56	.78	.001
	Number	55	-.19	(.077)	AA	56	.76	.001
	PPVT	55	.86	.001	VE	56	.33	.007
	AA	55	.72	.001	NIX	23	.37	.034
	VE	55	.33	.008	MAT	33	.53	.001
	NIX	22	.48	.012				
	MAT	33	.55	.001				

As has been noted previously (7.4), high positive correlations occur between age and the raw scores of each racial group on all the language and cognitive tests. In addition, as has similarly been noted (7.3.7), there is a significant negative correlation between absentee rates and age for the Aboriginal group. The number ability ratings of this group also correlate negatively with age, but this correlation only approaches criterial significance.

7.8 ABSENTEEISM AND RELATED VARIABLES

Table 7.22 includes Spearman rank order correlations and partial correlation coefficients for absentee rates and related variables for the Aboriginal and White samples. The effects of age were held constant in the partial correlations in an attempt to discover possible relationships between absenteeism and other variables which may be obscured by their having counter-directional relationships with age. Significance levels and numbers involved in each calculation also are included in the Table, which again included only those correlations 'approaching' or achieving criterial significance.

Significant negative correlations between teacher ratings of the number and reading skills of the Aboriginal children increase in strength when the effects of age are held constant. Negative associations similarly occur between ratings of the reading abilities and scholastic application of the White group and their absentee rates, but in this case, age has little effect, and whereas the correlations for scholastic application have high accompanying significance levels, those for reading only approach significance.

Controlling for the effects of age, however, does make more obvious a significant positive correlation between the AA scores of the White children and their absenteeism, and between the Nixon scores of the Aboriginal children and their absentee rates. Aboriginal absenteeism also has a significant positive correlation with their PPNS scores (with age having little effect).

TABLE 7.22
ABSENTEEISM AND RELATED VARIABLES

Var.	Related Var.	N	Aboriginal				Related Var.	N	White			
			r	Signif.	r (Age cont.)	Signif.			r	Signif.	r (Age cont.)	Signif.
DA	Age	55	-.26	.029	-	-	AA	54	.24	.037	.42	.001
	Number	55	-.25	.035	-.31	.011	Reading	54	-.21	.061	-.21	.058
	Reading	55	-.23	.047	-.27	.026	Applicn	54	-.30	.014	-.30	.012
	NIX	22	.19	NS	.37	.045						
	PPNS	27	.41	.016	.42	.016						

7.9 CONTROLLING FOR AGE AND ABSENTEEISM

Tables 7.23 to 7.34 incorporate partial correlations linking the indices of scholastic status, language, classification, locus of control and culture of poverty. As with the previous two Tables, they also include the number of subjects involved in the calculation of each coefficient and its accompanying level of significance. Unlike the previous Tables, however, non-significant correlations that are not within the 'approaching criterial significance' range also are included. A separate Table appears for each set of correlations between the internal indices of the above variable groupings, and between the indices of any two variable groupings. This format was preferred over one or two large tables incorporating a matrix of such correlations, as it enabled greater clarity of presentation of the results.

The effects, first of age, and second of age and absenteeism combined, have been removed from the correlations. The effects of age required controlling, both because raw scores formed the basis of the analyses and because the apparent relationship between age and other variables (already noted) may distort correlations between each of these other variables. Similarly, the effects of absenteeism were removed, in an attempt both to determine other possible influences on teacher ratings of scholastic status and application, which may be hidden by the negative associations between these variables and absenteeism, and to help clarify relationships between other variables free from its influence.

Some caution is required when interpreting large numbers of correlations, as the greater is their number, the greater is the likelihood of a Type 1 error occurring. Nevertheless, as correlations are

not proof of causation, but rather are indicative only of possible or probable relationships between variables that, in any study, require corroboration from other empirical or theoretical sources, this disadvantage was not thought to be of great magnitude. As with the findings of other inquiries, therefore, the correlations presented in this study need to be interpreted in terms of the pattern of expectations derived both from theory and from evidence available from other sources.

7.10 SCHOLASTIC STATUS RATINGS (INTERCORRELATIONS)

Table 7.23 presents partial correlations assessing the interrelationships between the three indices of scholastic status: teacher ratings of number abilities, reading abilities, and application to school work. In addition, the Table includes the accompanying significance levels for each coefficient as well as the number of subjects involved in the calculation of each correlation. The results for each ethnic group are presented separately.

As expected, highly significant positive correlations occur between each of the indices of scholastic status for each ethnic group.

7.11 SCHOLASTIC STATUS AND LANGUAGE

Partial correlation coefficients for the indices of scholastic status and language test performance are presented in Table 7.24. The format of the Table is similar to that of Table 7.23.

TABLE 7.23

SCHOLASTIC STATUS RATINGS (INTERCORRELATIONS)

Variable Pair	Aboriginal					White				
	N	r (Age Cont.)	Sign.	r (Age/DA Cont.)	Sign.	N	r (Age Cont.)	Sign.	r (Age/DA Cont.)	Sign.
Number x Reading	55	.71	.000	.69	.000	56	.79	.000	.78	.000
Number x Applcn.	55	.41	.001	.45	.000	56	.55	.000	.53	.000
Reading x Applcn.	55	.53	.000	.56	.000	56	.65	.000	.63	.000

TABLE 7.24

SCHOLASTIC STATUS RATINGS X LANGUAGE PERFORMANCE

Variable Pair	N	Aboriginal				N	White			
		r	Sign.	r	Sign.		r	Sign.	r	Sign.
		(Age Cont.)		(Age/DA Cont.)			(Age Cont.)		(Age/DA Cont.)	
Number x PPVT	55	-.04	NS	.02	NS	56	.19	(.084)	.20	(.070)
Number x AA	55	.30	.017	.37	.003	56	.11	NS	.21	(.065)
Number x VE	55	.36	.004	.35	.005	56	-.11	NS	-.10	NS
Reading x PPVT	55	.14	NS	.20	(.078)	56	.08	NS	.09	NS
Reading x AA	55	.47	.000	.53	.000	56	-.03	NS	.07	NS
Reading x VE	55	.34	.006	.33	.007	56	-.09	NS	-.07	NS
Applcn. x PPVT	55	.01	NS	.01	NS	56	.01	NS	.04	NS
Applcn. x AA	55	.37	.003	.37	.003	56	-.02	NS	.12	NS
Applcn. x VE	55	.14	NS	.14	NS	56	.07	NS	.10	NS

The number abilities of the Aboriginal children (as assessed by teacher ratings) have significant positive correlations with both their AA and VE test scores, but not with their PPVT scores. For the White children, however, no relationship is evident between ratings of their number skills and their VE scores, and positive correlations with their PPVT and AA scores only approach criterial significance. For the AA, this occurs only when absenteeism as well as age is controlled.

Similarly, ratings of the reading abilities of the Aboriginal children have significant positive correlations with their AA and VE scores, whereas those of the White children are unrelated to any language gauge. The PPVT scores of the Aboriginal children, in this case, also correlate positively, though not quite significantly, with their assessed reading ability.

A significant positive correlation between the AA scores of the Aboriginal children and ratings of their scholastic application also occurs. But no other relationship between performance on the language tests and application to school work is evident for either ethnic group.

7.12 SCHOLASTIC STATUS AND COGNITION

Partial correlations linking the indices of scholastic status and scores on the tests of classificatory performance are presented in Table 7.25.

TABLE 7.25

SCHOLASTIC STATUS RATINGS X CLASSIFICATORY PERFORMANCE

Variable Pair	N	Aboriginal			Sign.	N	White			Sign.
		r (Age Cont.)	Sign.	r (Age/DA Cont.)			r (Age Cont.)	Sign.	r (Age/DA Cont.)	
Number x Nix	22	.24	NS	.42	.030	23	-.24	NS	-.22	NS
Number x Mat	33	.72	.000	.78	.000	33	.12	NS	.12	NS
Reading x Nix	22	.30	(.088)	.45	.002	23	-.08	NS	-.06	NS
Reading x Mat	33	.55	.001	.58	.000	33	-.05	NS	-.04	NS
Applcn. x Nix	22	-.09	NS	-.11	NS	23	-.01	NS	.03	NS
Applcn. x Mat	33	.25	(.087)	.24	(.093)	33	.03	NS	.04	NS

Significant positive correlations are evident between ratings of both the number and reading skills of the Aboriginal children and their scores on both classificatory gauges. For the Nixon, however, criterial significance is achieved only when the effects of absenteeism as well as of age are controlled. Positive correlations also occur between their Matrices scores and ratings of their scholastic application, but these only approach criterial significance. In contrast, no relationship is apparent between classificatory performance and scholastic status for the White children. A relatively high negative correlation between their Nixon Test scores and ratings of their number abilities fails to reach, or even approach, criterial significance.

7.13 SCHOLASTIC STATUS AND LOCUS OF CONTROL

Included in Table 7.26 are the partial correlations between the indices of scholastic status and locus-of-control orientation, with their accompanying significance levels and subject numbers, for each racial group.

There is a general trend for ratings of the Aboriginal children on each index of scholastic status to be positively associated with scores on both locus-of-control scales. The trend is strongest for the CNS, and improves for the PPNS when absenteeism as well as age is controlled, but, perhaps reflecting the small sample sizes, none of the correlations are significant. Correlations between ratings of their reading ability and their CNS scores, however, approach criterial significance.

TABLE 7.26

SCHOLASTIC STATUS RATINGS X LOCUS-OF-CONTROL ORIENTATION

Variable Pair	N	Aboriginal				N	White			
		r (Age Cont.)	Sign.	r (Age/DA Cont.)	Sign.		r (Age Cont.)	Sign.	r (Age/DA Cont.)	Sign.
Number x PPNS	27	-.00	NS	.15	NS	31	-.16	NS	-.21	NS
Number x CNS	23	.20	NS	.22	NS	25	-.26	NS	-.29	(.094)
Reading x PPNS	27	.03	NS	.17	NS	31	-.09	NS	-.14	NS
Reading x CNS	23	.29	(.093)	.31	(.085)	25	-.47	.010	-.51	.007
Applcn. x PPNS	27	.22	NS	.22	NS	31	-.05	NS	-.11	NS
Applcn. x CNS	23	.27	NS	.27	NS	25	-.23	NS	-.29	(.094)

A similar pattern of weaker associations between PPNS scores and scholastic status ratings, and stronger associations between CNS scores and scholastic status ratings occurs for the White children. But the relationships are in the reverse direction to those for the Aborigines. Internality rather than externality is associated with scholastic status. This relationship, however, achieves (for reading) or approaches (for number and application) criterial significance only for the CNS.

7.14 SCHOLASTIC STATUS AND THE CULTURE OF POVERTY

Following the pattern of the previous four Tables, Table 7.27 incorporates partial correlations between ratings of the scholastic status of the children in the study and the scores their families receive on the Culture of Poverty Scale.

There tends to be a negative association between CPS scores and ratings of both reading and number skills for each ethnic group. But these negative correlations achieve (for number abilities) or approach (for reading abilities) criterial significance only for the White group. No relationship is apparent between the scholastic application of either group and their families' CPS scores.

7.15 LANGUAGE TESTS (INTERCORRELATIONS)

Intercorrelations between the language test scores are presented in Table 7.28 for each group. As usual, the effects of age, and of age and absenteeism, have been removed, and the Tables include both the significance levels accompanying the correlation coefficients and the number of subjects involved in each correlation analysis.

TABLE 7.27
SCHOLASTIC STATUS RATINGS X CPS SCORES

Variable Pair	N	Aboriginal			N	White		
		r (Age Cont.)	Sign.	r (Age/DA Cont.)		r (Age Cont.)	Sign.	r (Age/DA Cont.)
Number x CPS	37	-.22	NS	-.19	34	-.39	.013	-.39
Reading x CPS	37	-.20	NS	-.19	34	-.27	(.067)	-.26
Applcn. x CPS	37	.03	NS	.02	34	-.03	NS	-.01

TABLE 7.28
LANGUAGE TEST PERFORMANCE (INTERCORRELATIONS)

Variable Pair	N	Aboriginal			N	White		
		r (Age Cont.)	Sign.	r (Age/DA Cont.)		r (Age Cont.)	Sign.	r (Age/DA Cont.)
PPVT x AA	55	.54	.000	.53	55	.20	(.073)	.19
PPVT x VE	55	.19	(.082)	.21	55	.15	NS	.15
AA x VE	55	.45	.000	.47	55	.19	(.088)	.17

The AA test scores of the Aboriginal children have significant positive correlations with both their PPVT and VE test scores. A positive correlation between their PPVT and VE scores, however, only approaches criterial significance. A similar, though much weaker, trend is evident for the White group. Positive correlations occur between their AA scores on the one hand and their PPVT and VE scores on the other, but these approach criterial significance only, and when the effects of both absenteeism and age are controlled, even this low level of significance is not achieved by the AA x VE correlation. Nor is it achieved for partial correlation coefficients between the PPVT and VE scores of these children.

7.16 LANGUAGE AND COGNITION

Table 7.29 incorporates partial correlations and associated statistics relating to scores on the tests of language and classificatory performance.

Although positive correlations occur between the Nixon scores of each group and their scores on all the language measures, only those correlations with the AA scores achieve significance for both groups. PPVT x Nixon correlations are significant for the Aboriginal group but only approach criterial significance for the White group; and VE x Nixon correlations are not significant (nor do they approach it) for either group (when both age and absenteeism are controlled).

No correlation between performance on the Matrices Test and on any of the language tests is significant for either group, although a negative correlation with the PPVT scores of the Aboriginal children approaches significance. Trends also tend to be inconsistent.

TABLE 7.29

LANGUAGE PERFORMANCE X CLASSIFICATORY PERFORMANCE

Variable Pair	N	Aboriginal				N	White			
		r (Age Cont.)	Sign.	r (Age/DA Cont.)	Sign.		r (Age Cont.)	Sign.	r (Age/DA Cont.)	Sign.
PPVT x Nix	22	.74	.000	.74	.000	23	.34	(.064)	.34	(.072)
PPVT x Mat	33	-.25	(.083)	-.25	(.076)	33	.13	NS	.13	NS
AA x Nix	22	.68	.000	.68	.000	23	.45	.021	.43	.027
AA x Mat	33	.17	NS	.17	NS	33	-.13	NS	-.16	NS
VE x Nix	22	.17	NS	.22	NS	23	.31	(.087)	.30	NS
VE x Mat	33	.13	NS	.13	NS	33	-.06	NS	-.06	NS

Low positive correlations occur between Matrices scores and both the AA and VE scores of the Aboriginal children, and between the Matrices scores and the PPVT scores of the White children. But low negative correlations occur between the Matrices and AA scores of the White children and virtually no relationship is evident between their VE and Matrices scores.

7.17 LANGUAGE AND LOCUS OF CONTROL

The results of the partial correlational analysis between language test performance and locus-of-control orientation are presented in Table 7.30.

With the exception of a highly significant negative correlation between the CNS and PPVT scores of the Aboriginal children, few relationships are apparent between performance on the language tests and locus-of-control orientation for either group. Correlations other than the one noted above, between PPVT scores and locus-of-control scale scores for either group, for example, tend to be minimal. Similarly, no relationship is evident between performance on the AA and locus-of-control orientation for either group, although a slight but not significant positive correlation does occur between the PPNS and AA scores of the Aboriginal children. Stronger trends are indicated with regard to VE test scores. When both age and absenteeism are controlled, positive correlations between the VE and PPNS scores of the White children approach criterial significance. Low positive VE x CNS correlations for the White group, however, do not even approach criterial significance.

TABLE 7.30

LANGUAGE PERFORMANCE X LOCUS-OF-CONTROL ORIENTATION

Variable Pair	N	Aboriginal				N	White			
		r (Age Cont.)	Sign.	r (Age/DA Cont.)	Sign.		r (Age Cont.)	Sign.	r (Age/DA Cont.)	Sign.
PPVT x PPNS	27	-.02	NS	-.10	NS	31	.05	NS	.04	NS
PPVT x CNS	23	-.69	.000	-.71	.000	25	.08	NS	.09	NS
AA x PPNS	27	.23	NS	.19	NS	31	-.00	NS	.09	NS
AA x CNS	23	-.04	NS	-.05	NS	25	.05	NS	.03	NS
VE x PPNS	27	.22	NS	.28	(.090)	31	-.13	NS	-.12	NS
VE x CNS	23	.11	NS	.11	NS	25	.28	(.094)	.29	(.089)

7.18 LANGUAGE AND THE CULTURE OF POVERTY

Partial correlations concerning the relationship between the performance of children on the language tests and their families' scores on the culture of poverty scale are presented in Table 7.31, along with their associated subject numbers and significance levels.

No relationship is evident between the language scores of the Aboriginal children and their families' CPS scores. For the White children, however, there tends to be a negative association between language test scores and family background, as assessed by the culture of poverty scale. These negative correlations achieve criterial significance for the PPVT and approach it for the VE, but not for the AA.

7.19 COGNITION AND LOCUS OF CONTROL

As no children were given both the Nixon and the Matrices, correlations between both tests could not be calculated. Table 7.32, therefore, incorporates partial correlations and related statistics which examine the relationship between the performance of children on the classificatory gauges and their scores on the locus-of-control scales. No children who were given the Nixon were also given the CNS, and hence correlations between these two measures do not appear. In addition, only the eight-year-olds were administered both the Matrices and the PPNS and hence subject numbers are especially small. Nevertheless, correlations are included as an indication of possible trends that may require future examination.

TABLE 7.31

LANGUAGE PERFORMANCE X CPS SCORES

Variable Pair	N	Aboriginal				N	White			
		r (Age Cont.)	Sign.	r (Age/DA Cont.)	Sign.		r (Age Cont.)	Sign.	r (Age/DA Cont.)	Sign.
PPVT x CPS	37	-.05	NS	-.07	NS	34	-.37	.016	-.38	.016
AA x CPS	37	-.05	NS	-.06	NS	34	-.10	NS	-.13	NS
VE x CPS	37	.06	NS	.06	NS	34	-.25	(.077)	-.26	(.076)

TABLE 7.32

CLASSIFICATORY PERFORMANCE X LOCUS-OF-CONTROL ORIENTATION

Variable Pair	N	Aboriginal				N	White			
		r (Age Cont.)	Sign.	r (Age/DA Cont.)	Sign.		r (Age Cont.)	Sign.	r (Age/DA Cont.)	Sign.
Nix x PPNS	20	.39	.047	.28	NS	23	.19	NS	.22	NS
Mat x PPNS	7	.39	NS	.41	NS	8	-.51	NS	-.41	NS
Mat x CNS	23	-.29	(.092)	-.30	(.094)	25	-.41	.023	-.41	.026

The Nixon scores of both groups correlate positively with their PPNS scores, but in neither case are the correlations significant (nor do they approach it) when both age and absenteeism are controlled. A significant positive correlation between the Nixon and PPNS scores of the Aboriginal children prior to the removal of absentee-induced effects, therefore, appears to be spurious.

High positive correlations between the PPNS and Matrices scores of the Aboriginal eight-year-olds and high negatives ones between the same measures for the White eight-year-olds fail even to approach criterial significance, as the numbers in each group are extremely small. Negative correlations occur between the CNS and Matrices scores of both Aborigines and Whites. But, whereas these correlations are significant for the White group, they only approach significance for the Aboriginal group.

7.20 COGNITION AND THE CULTURE OF POVERTY

The relationships between the children's performance on the classificatory gauges and their families' score on the CPS are summarised for each ethnic group in Table 7.33.

Negative correlations occur between the Nixon Test scores and CPS scores for each group, but subject numbers are small and none of the correlations approach criterial significance. A significant negative correlation does occur, however, between the Matrices performance of the Aboriginal children and their families' CPS scores. For the White group, the correlation between both groups is minimal.

TABLE 7.33

CLASSIFICATORY PERFORMANCE X CPS SCORES

Variable Pair	N	Aboriginal			Sign.	N	White			Sign.
		r (Age Cont.)	Sign.	r (Age/DA Cont.)			r (Age Cont.)	Sign.	r (Age/DA Cont.)	
Nix x CPS	14	-.28	NS	-.33	NS	18	-.22	NS	-.23	NS
Mat x CPS	23	-.36	.049	-.37	.051	16	.09	NS	.09	NS

TABLE 7.34

LOCUS-OF-CONTROL ORIENTATION X CPS SCORES

Variable Pair	N	Aboriginal			Sign.	N	White			Sign.
		r (Age Cont.)	Sign.	r (Age/DA Cont.)			r (Age Cont.)	Sign.	r (Age/DA Cont.)	
PPNS x CPS	17	.03	NS	.00	NS	22	.50	.010	.52	.009
CNS x CPS	17	.06	NS	.06	NS	12	-.58	.031	-.58	.040

7.21 LOCUS OF CONTROL AND THE CULTURE OF POVERTY

Like the classificatory gauges, the two locus-of-control gauges were not given to the same children, and hence no correlations occur between them. Table 7.34, therefore, focuses on partial correlations between children's scores on the locus-of-control measures and their families' scores on the culture of poverty scale.

No relationship appears evident between the locus-of-control orientation of the Aboriginal children (as assessed by both scales) and the CPS scores of their families. For the White group, however, significant correlations do occur between the scores on both measures, despite the small sample numbers. But the direction of these correlations vary for each locus-of-control gauge. For the PPNS they are positive, and for the CNS they are negative.

7.22 MULTIPLE REGRESSION ON SCHOLASTIC STATUS

As noted previously, an attempt to explore more fully the relationships between scholastic status and other variables was made, using multiple regression procedures. The restricted age range of the classificatory and locus-of-control gauges required that results for the older and younger children of each ethnic group be considered separately. An advantage of this procedure is that it enables an examination of age-related variations in the relative contributions of differing variables to scholastic status. The eight-year-old group were excluded from the analyses because they were the only group given both the PPNS (in common with the youngest two age groups) and the Matrices Test (along with the oldest two age groups), and because they were too few in number to warrant a separate regression analysis. Their exclusion has the advantage of sharpening possible contrasts between the older and younger children.

The analyses were conducted using stepwise multiple regression procedures (Nie et al., 1975). As scholastic status formed a focal point of the inquiry, the adjusted ratings of number and reading abilities, and of scholastic application, acted as dependent variables, while absentee rates and scores on the language and classificatory tests, locus-of-control inventory and culture of poverty scale acted as independent variables. The effects of age on the raw scores of the language and classificatory tests were removed, using simple regression procedures. The standardised residual scores derived from this procedure were then incorporated into the multiple regression analysis.

The results are presented in Tables 7.35 to 7.37. Each table contains the three variables that 'contribute' most to the variance in scores on each index of scholastic status for both the older and younger children of each ethnic group (Predictor Variable - Actual), when all the independent variables are included in the regression equation, as well as the accompanying change each of these variables makes to the R^2 value. This value (R^2) provides a measure of the actual amount of variation in the dependent variable that can be predicted by each of the independent variables. The ordering of the three variables follows the sequence of their inclusion into the multiple regression equation, using stepwise procedures.

But as the scales assessing the independent variables differ substantially in magnitude, their *relative* contributions to the variation in scholastic status ratings were assessed, using standardised partial regression coefficients (Beta). This statistic indicates how much the dependent variable changes per standard deviation unit of change in an independent variable. Thus the tables also include the three independent variables (Predictor Variable - Relative) that are most important in terms of their relative influence on scholastic status ratings, along with their accompanying Beta values.

7.23 NUMBER ABILITIES (REGRESSION ANALYSIS)

Table 7.35 presents the results of the multiple regression analyses of number ability ratings.

A little more than fifty-six percent of the variation in number ability ratings of the Aboriginal six- and seven-year-olds can be predicted by their absentee rates, CPS scores and language performance on the VE, when the influences of all independent variables are considered. With regard to the predictive value of the independent variables relative to each other, the standardised partial Beta values demonstrate that one standard deviation unit of change in CPS scores of these children's families would introduce the greatest amount of variation in their number ability ratings, followed in relative importance by one standard deviation unit change in VE scores and in absenteeism, respectively. As expected, the influence of absenteeism and CPS scores on the number ability ratings of these children are in a negative direction, while that of VE scores is in a positive direction.

CPS scores also account for much of the variation in the number ability ratings of the young White children. Together with the AA and Nixon Test scores of these children, they account for 62.23% of this variation. When the relative contribution of the independent variables is considered, however, Standard English Mastery, as assessed by the AA, is reduced in importance, while locus-of-control orientation (PPNS scores) assumes third position, behind culture of poverty involvement (CPS scores) and classificatory performance respectively. As expected, the direction of the influence of the CPS is negative, but surprisingly, it also is negative for Nixon and positive for the PPNS scores.

TABLE 7.35
MULTIPLE REGRESSION ON RATINGS OF NUMBER ABILITY

Age Group	Ordering	ABORIGINAL				WHITE			
		Predictor Variable (Actual)	Contribtn. to R ²	Predictor Variable (Relative)	Beta	Predictor Variable (Actual)	Contribtn. to R ²	Predictor Variable (Relative)	Beta
6-7	1	DA	.1731	CPS	-.66	CPS	.4276	CPS	- .93
	2	CPS	.2476	VE	.52	AA	.1429	NIX	- .30
	3	VE	.1430	DA	-.45	NIX	.0518	PPNS	.24
Total R ²			<u>.5637</u>				<u>.6223</u>		
9-10	1	VE	.3049	AA	.41	AA	.0620	CPS	-1.36
	2	MAT	.0665	MAT	.33	CNS	.0426	CNS	-1.06
	3	DA	.0917	DA	-.28	CPS	.1279	AA	.87
Total R ²			<u>.4631</u>				<u>.2325</u>		

For the older Aboriginal children, the three major predictors of number ability ratings are language performance (as assessed by the VE), classificatory performance, and absenteeism. Together they account for 46.31% of the variance in the number ability ratings of these children. In terms of the relative influence of independent variables on these ratings, however, Mastery of Standard English, as assessed by the AA, is of most importance, followed by Matrices scores, with absentee rates in third place. The direction of influence for each variable is in the expected direction - positive for the AA and Matrices scores, and negative for absentee rates.

Standard English Mastery, as assessed by the AA test, also is one of the three major predictors of the number ability ratings of the older White children; but the other two are locus-of-control orientation and culture of poverty involvement. Altogether, 23.25% of the variation in number ability ratings is accounted for by these three variables, with CPS scores having the greatest effect per unit of standard deviation, followed by CNS and AA scores respectively. As for the older Aboriginal children, the influence of each of the three most important predictor variables is in the expected direction - negative for CPS and CNS scores, and positive for the AA scores.

7.24 READING ABILITIES (REGRESSION ANALYSIS)

Table 7.36 presents the findings of multiple regression procedures on the reading ability ratings of the Aboriginal and White six- and seven-year-olds and nine- and ten-year-olds.

TABLE 7.36
MULTIPLE REGRESSION ON RATINGS OF READING ABILITY

Age Group	Ordering	ABORIGINAL				WHITE			
		Predictor Variable (Actual)	Contribtn. to R ²	Predictor Variable (Relative)	Beta	Predictor Variable (Actual)	Contribtn. to R ²	Predictor Variable (Relative)	Beta
6-7	1	CPS	.2150	CPS	-.66	CPS	.3852	CPS	- .84
	2	VE	.1811	VE	.59	AA	.1302	AA	- .33
	3	DA	.1025	NIX	.58	PPNS	.0158	PPNS	.13
Total R ²			<u>.4986</u>				<u>.5312</u>		
9-10	1	AA	.4051	DA	-.50	CNS	.1953	CPS	-2.13
	2	DA	.1055	MAT	.45	CPS	.2225	CNS	-1.77
	3	MAT	.0920	CNS	.33	DA	.0646	PPVT	- .96
Total R ²			<u>.6026</u>				<u>.4824</u>		

The three major predictors of variation in the reading ability ratings of the six- and seven-year-old Aboriginal children are the same as for their number ability ratings. Together, culture of poverty involvement, language performance (VE) and absenteeism (DA) contribute to 49.86% of this variation. When the relative influence of one standard deviation unit of change in each independent variable is assessed, however, classificatory ability assumes greater importance than absenteeism. Its relative contribution is only slightly less than performance on the VE, but both are relatively less important than CPS scores. All relationships are in the expected direction - positive for VE and Nixon scores, and negative for CPS scores.

Culture of poverty involvement also is the major predictor of variation in the reading ability ratings of the young White children. It is followed in relative importance by the AA and PPNS scores respectively. Altogether, 53.12% of the variation in reading ability ratings of these children can be predicted by these three variables. Like the unexpected negative relationship between the Nixon scores of these children and their number ability ratings, their AA scores also display an unexpected negative association with their reading ability ratings. The trends for the other two variables also follow those for number ability ratings, with the influence of CPS scores, as expected, being negative, and that of PPNS scores, unexpectedly being positive.

Results for the reading ability ratings of the older Aboriginal children, like those for their number ability ratings, vary considerably, both from the results of the younger Aboriginal children, and from those of the older White children. Standard English Mastery (AA), absenteeism and classificatory performance (Matrices) are the three variables that predict most of the actual variation (60.26%) in

the reading ability ratings of these children. But when the relative influence per standard deviation unit of the independent variables is considered, AA scores no longer make the top three predictor variables. They are replaced by CNS scores which, however, are less important than Matrices scores or absenteeism. Of the three, absenteeism is the most important. The relationships between reading ability ratings and CPS scores (negative) and between reading ability ratings and Matrices scores (positive) are in the expected direction, but the positive association between reading ability ratings and CNS scores was not anticipated.

Unlike the case for the older Aboriginal children, but following the pattern for the two younger age groups, culture of poverty involvement is the major predictor of the reading ability ratings of the older White children. It is followed in relative importance (as regards the amount of variation in the dependent variable introduced by a change of one standard deviation unit change in the independent variables) by locus-of-control orientation and Standard English Mastery (PPVT) respectively. All of the relationships are in the expected directions (negative for CPS and CNS, and positive for PPVT). Absenteeism is more important as a predictor than PPVT scores to the actual variation in the reading ability ratings of these children, however, and in conjunction with the CNS and CPS scores, accounts for 48.24% of the variation in these ratings.

7.25 SCHOLASTIC APPLICATION (REGRESSION ANALYSIS)

The results of the multiple regressions on scholastic application are presented in Table 7.37.

TABLE 7.37
MULTIPLE REGRESSION ON RATINGS OF SCHOLASTIC APPLICATION

Age Group	Ordering	ABORIGINAL				WHITE			
		Predictor Variable (Actual)	Contribtn. to R ²	Predictor Variable (Relative)	Beta	Predictor Variable (Actual)	Contribtn. to R ²	Predictor Variable (Relative)	Beta
6-7	1	CPS	.4521	CPS	-.88	CPS	.2804	CPS	- .61
	2	VE	.0434	VE	.44	AA	.1604	AA	- .45
	3	AA	.0450	AA	-.31	VE	.1055	VE	.30
Total R ²			<u>.5405</u>				<u>.5463</u>		
9-10	1	CPS	.0970	CPS	.48	CPS	.1821	CPS	1.81
	2	DA	.1087	DA	-.44	DA	.1181	DA	- .96
	3	VE	.1063	CNS	.25	PPVT	.0498	CNS	.86
Total R ²			<u>.3120</u>				<u>.3500</u>		

The three most important predictors of the scholastic application ratings of the young Aboriginal sample account for 54.05% of its variance. They are: culture of poverty involvement, which accounts by far for most of this variation (45.26%); language performance (VE); and Standard English Mastery (AA). Of these, CPS scores are relatively the most important in terms of its effects per unit of standard deviation; followed by VE and finally AA. Whereas the directional nature of the relationships between application ratings and CPS scores (negative) and between application ratings and VE scores (positive) is as expected, the negative association between application ratings and AA scores was unexpected.

The same three variables also are the major predictors of the application ratings of the White six- and seven-year-olds, and again account for slightly more than fifty-four percent (54.63%) of the variation in these ratings. Again, the amount of variation in these ratings, associated with one standard deviation unit of change in CPS scores is greater than that associated with one standard deviation unit change for each of the other variables. In contrast to the results for the Aboriginal group, however, the AA scale assumes second place, and VE is relegated to third place with regard to both their actual and relative predictive value. Nevertheless, like the previous finding, the influence of the AA tends to be negative, against expectations, unlike the expected influences in a negative direction for CPS scores, and in a positive direction for VE scores.

For the older Aboriginal children, culture of poverty involvement, absenteeism and language performance (VE) contribute most (31.40%) to the variation in their application ratings. In terms of the relative importance of variables, however, locus-of-control

orientation supersedes language performance. Nevertheless, it manages only third position, behind culture of poverty involvement, the most important relative predictor variable, and absenteeism, the second most important.

The results for the White nine- and ten-year-olds are similar, except that PPVT scores replace VE scores in combining with culture of poverty involvement and absenteeism as the major predictors of variation in their scholastic application ratings. Together, these three variables predict 35.00% of this variation. Like VE scores, however, PPVT scores are replaced by CNS scores when the relative influences of variables per standard deviation unit, are assessed. Also following the pattern for the Aboriginal children, the CPS scores are most important in this regard, followed by absentee rates and then by CNS scores.

The direction of interrelationships between each of the three independent variables and the application ratings for both ethnic groups is similar. As expected, it is negative with regard to absenteeism; but, contrary to expectations, it is positive for both CPS and CNS scores.

The findings presented in this Chapter are discussed in detail in Chapter 8.

CHAPTER 8

QUANTITATIVE RESULTS:

INTERPRETATION

8.1 INTRODUCTION

The quantitative results presented in Chapter 7 are discussed in this Chapter with a view not only to assessing their support or otherwise for the hypotheses listed in Chapter 5 (5.4), but also to examining unanticipated findings in an attempt to determine profitable directions for future research and practice, related to the schooling of Aboriginal children. Following the sequence in which the hypotheses were presented, the discussion focuses initially on findings related to the culture of poverty, and then on findings related to scholastic status, absenteeism, language, classification, and locus of control, in that order. In each instance, the results are discussed from the viewpoint both of differences between the two ethnic groups, and of interactions between variables for each group. Where appropriate, possible alternative explanations of the findings are presented and evaluated. The Chapter concludes with a statement summarising the interpretations of the findings made by the author.

8.2 THE CULTURE OF POVERTY

The findings reported in Table 7.13 provide firm support for Hypothesis 1 listed in Chapter 5, and for the conclusions reached in Chapters 4 and 6. The significantly higher scores of the Aboriginal families relative to the low-socioeconomic European families suggest strongly that they have many more characteristics of a culture of poverty than do the White families. The persistence of these characteristics amongst the Aborigines, despite improvements in their living conditions (noted in Chapter 6), supports Lewis' contention that the

reduction of poverty alone may be insufficient to overcome the culture of poverty.

The significant difference found in comparisons between the CPS scores of the families of the Aboriginal children attending each of the three schools in the study appears to reflect the large difference between the high-scoring Bega families and the low-scoring Eden families, and is likely to be an outcome of the markedly different characters of the two towns. Eden is a low-income, light-industrial coastal town that has experienced substantial growth in recent years. Bega, on the other hand, is situated about 40 km inland and is a centre for the local beef and dairy industries. It has experienced little recent growth.

As a consequence, many Aborigines living in Eden have been attracted there by the economic opportunities and housing assistance available in the town (Interviews 73.1; 78.1; 87.1). Unlike the Bega families, they have actively sought to improve their material living conditions. Thus, it is likely that they are less fatalistic or dependent in outlook than the Bega families. This seems especially to be the case for the significant minority of Aboriginal immigrants attracted from areas beyond the South Coast, who also appear to have experienced less severe deprivation in their recent past than the local families (Interviews 73.1; 76.1). In addition, an outcome of the greater economic opportunities at Eden is that employment is more available for Aborigines there than in Bega. As well, all Aboriginal housing in Eden is interspersed with that of the White groups, whereas several Bega families continue to experience de facto segregation of habitation. Finally, the attitudinal and behavioural gap between the Aboriginal community and the largely itinerant, working-class White

community at Eden, is likely to be less than between the Aborigines of Bega and the more stable and conservative White community in that town.

The results for the Bermagui/Wallaga Lake Aboriginal sample which had an average score between the other two, require some qualification. Only a small number of families could be contacted at Wallaga Lake, and these all were the families of community leaders who had higher rates of employment and involvement generally with the White community than did the other residents. Similarly, the families residing at Bermagui had deliberately moved away from Wallaga Lake, both to avoid influences associated with living there, and to 'mix' more with the White community (Interview 7.3). Hence, the sample grossly under-represents the inhabitants of Wallaga Lake, and is likely to be composed of atypical families. It is probable, therefore, in view of the isolation of the reserve and the generally poorer conditions prevailing there than elsewhere, that, had more residents been available for interview, their average CPS scores would have matched, if not exceeded, those of the Bega Aboriginal families. (Estimated CPS values for the Wallaga Lake families of the children tested, based on information obtained from community workers (Interviews 4.6; 31.2), average out at 28.6 compared to the Bega average of 24.87.)

Although differences between the White families are not significant (Table 7.15), the tendency for the White scores to be the reverse of the trend for the Aboriginal scores also may be an outcome of the varying characters of the towns. Since a higher proportion of Eden's population is made up of recent immigrants than is the case for Bega, fewer of its White community, compared to Bega's may have had sufficient time, opportunity, or inclination, to become involved

in local organisations or activities. Hence, they are likely to have scored more highly on the CPS. The average score of the Bermagui Whites, placed between the other two, may reflect similar influences. Like Eden, Bermagui is an important centre for the fishing industry, but few other industries are situated there⁽¹⁾ and many of its residents are retired. Like Bega, therefore, it has experienced little growth in recent years and its population is more likely to have had sufficient time and opportunity to become involved in local matters.

Although extensive validity and reliability studies have not been conducted with the CPS, and confirmation of its effectiveness as a gauge of a family's participation in a culture of poverty must await such studies, the results referred to above indicate that it does serve as an instrument that differentiates successfully between families, and especially between Aboriginal and White families, on a scale of socioeconomic variables attuned to Lewis' culture of poverty concept.

8.3 SCHOLASTIC STATUS

Hypothesis 2(a) received partial support only. When assessed by teacher ratings of their academic performance and application, the scholastic status of Aboriginal children is less than that of the White children. But this trend is significant only for the females (Table 7.2).

The finding of no significant difference in ratings of scholastic status between the Aboriginal males and the White males is surprising. It runs counter to the usual findings, documented in

(1) Tourism, transport (truck driving), and logging, however, are important.

Chapter 1, of depressed Aboriginal educational status relative to that of White children. But only infrequently are comparisons made between high-contact Aboriginal children and White children belonging to rural families of low-socioeconomic status. As rural children in general perform less well at school than their urban counterparts, and as lower-socioeconomic groups do less well than higher-status groups (Fitzgerald, 1976), White children from families that are both rural and of low-socioeconomic status are likely to perform less well at school than most other European groups. The non-significant difference in scholastic status between the Aboriginal males and the White males in this study, therefore, is more likely an indication of the low status of the White children than of the high status of the Aboriginal children. This interpretation is supported by the finding that both groups received below-average ability ratings. Thus it is possible that, like Aborigines, low-socioeconomic rural White children constitute a group receiving insufficient special attention by educators.

But such an explanation cannot account for the above-average ability ratings of the White female children. Not only is the scholastic status of this group on each index significantly superior to the scholastic status of Aboriginal females (Table 7.2), but it also is superior to that of White males (Table 7.3).⁽¹⁾ Since the White children of both sexes came from low-socioeconomic rural families, variables other than family background appear to be influencing their respective status ratings.

(1) In contrast, no significant difference in scholastic status occurs between Aboriginal males and females.

One such variable may be the subjective element of teacher ratings. Infant and primary school teachers, most of whom are White females, for example, may have expectations of pupil behaviour that are more frequently met by White female children than by the males of either ethnic group, or by Aboriginal females. Consequently, the teachers may develop especially favourable attitudes towards their White female pupils. These attitudes, in turn, may bias their subjective assessments of the scholastic status of these children, or, alternatively, may have the 'Pygmalion effect' of improving the actual performance and application of these children. The question of subjectivity with regard to teacher ratings of the scholastic status of both ethnic groups in the study will be discussed more fully later in the Chapter.

Alternative possibilities also require consideration. High positive correlations, for example, occur between application ratings and ability ratings (Table 7.23). It is possible, therefore, that the White females, whose application ratings are higher than those of the other groups, perform better at school simply because they try harder. As will be discussed more fully later in the Chapter, absentee rates also may be influential. There tends to be a negative association between absenteeism and ratings on some indices of scholastic status for each ethnic group (Table 7.22), and although the difference is not statistically significant, there is a trend for White females to be away from school less often than White males (Table 7.6). Thus, either together or separately, the higher attendance rates and greater application of the White females may account for their higher ability ratings. In contrast, a slight trend for Aboriginal females to have higher application ratings than Aboriginal

males (Table 7.3) may be offset by a higher incidence of absenteeism among the females than among the males (Table 7.6).⁽¹⁾

The scholastic status ratings do not provide evidence in support of the view that South Coast Aboriginal children experience a cumulative deficit in educational performance relative to the performance of other students. There is a negative correlation between ratings of their number abilities and their age, but it is not significant (Table 7.21) and inspection of Table 7.4 reveals that the Aboriginal children to receive the lowest scholastic status ratings were the eight-year-olds, not the older age groups. The tendency for the older Aboriginal children to be away from school less often than the younger ones (Table 7.22) may account for these findings, as their greater attendance rates may inhibit a deterioration in performance that otherwise may have occurred.

As school-based variations in unadjusted scholastic status ratings (Table 7.1) have already been discussed (Section 7.1), they need not be elaborated upon here.

The hypothesis, 2(b), that a major influence on the scholastic status of children is the degree of involvement their family has in the culture of poverty, receives some, but not strong, support. Correlations between the CPS scores of both groups and their ability ratings are negative, but achieve or approach statistical significance

(1) Although neither of these trends are statistically significant for the Aboriginal group, as noted earlier, they represent real trends for the Aboriginal children on the Far South Coast of New South Wales, as virtually all were included in the study. But caution is required when generalising beyond this group.

only for the White group. In addition, no relationship is evident between the application ratings of either group and their CPS scores (Table 7.27).

More detailed analysis of the results, using multiple regression procedures (Tables 7.35 to 7.37) reveals, however, that trends vary considerably between the older and younger age groups. For the six- and seven-year-olds of both ethnic groups, CPS scores are relatively more important as predictors of ratings on each scale of scholastic status than any other variable included in the study. Without exception, they account for a greater proportion of the variance in scholastic status ratings of the younger children than they do for the older children, and the effect is consistently negative for both younger age groups. But for the older children, a similar, though weaker, trend is evident only with regard to the ability ratings of the White children. The CPS scores of the families of the older Aboriginal children show little relationship to their ability ratings. In common with the CPS scores of the families of the older White group, however, they do display a positive association with application ratings, for which they are the best 'relative' predictors.

These results indicate, therefore, that culture of poverty involvement, as assessed by the CPS, has a strong negative association with the ability ratings of the White children, regardless of their age, though its importance may decline with age. Such a finding is consistent with earlier studies linking poor levels of educational attainment with low-socioeconomic status (Fitzgerald, 1976) but, as we shall see later in the Chapter, some doubt exists concerning the validity of the scholastic status ratings of the White children.

For the Aboriginal children, the negative association between ability ratings and culture of poverty involvement is evident only for the younger age groups. Nevertheless, the lack of association for the older age groups does not mean necessarily that their academic abilities are independent of their families' culture of poverty involvement. Many of these older children are likely to have experienced more deprived circumstances when they were young; hence their current scholastic status may reflect these early influences rather than the effects of subsequent changes in their sociocultural circumstances. When interviewed, several parents now living in improved circumstances voluntarily suggested that their younger children were performing better at school than their older children (Interviews 6.3; 73.1), but sample numbers were too small to check this observation quantitatively. The truncated samples also have substantially increased the likelihood of chance error. A follow-up study of these same families, and families that have experienced less change, therefore, may help clarify these issues.

Another finding hidden in the correlation analysis, but which emerges in the multiple regression analysis, is that CPS scores also are relatively more important than any other variable in predicting the application ratings of both groups. But, as has been noted, the direction of the relationship between both sets of scores is negative for the younger children and positive for the older children of each ethnic group. Thus, rather than having no relationship, as indicated by the close-to-zero correlations that occur when all age groups are combined, a child's application to school work and his family's culture of poverty involvement appear to be clearly linked.

The detrimental effect of this involvement noted for the younger age groups was anticipated, but the reverse effect for the older children was not. It indicates that older children from families with higher CPS scores may attempt to compensate for relatively 'deprived' backgrounds by trying harder. Perhaps, contrary to popular opinion, the school environment is more rewarding for them, relative to their home environments, than it is for the other children; or perhaps their home environment provides them with a greater incentive to do well at school to ensure improved socioeconomic conditions later in life. If the latter alternative is true, these effects do not support Lewis' position concerning the perpetuation of the culture of poverty, nor his proposal that it engenders a passive, fatalistic and dependent world view (at least for this age group). As will be discussed later in the Chapter (8.7), this interpretation receives some support from the findings of the locus-of-control scales, but, pending further research, it remains speculative. The results may be no more than a product of chance variation.

8.4 ABSENTEEISM

Hypothesis 3(a) receives ample support from the evidence presented in Table 7.5. Regardless of their sex, the Aboriginal children spend far less time at school than their White peers. This finding is consistent with research evidence referred to in Chapter 1.

The trend for Aboriginal females to be absent more often than Aboriginal males, however, is surprising (Table 7.6). Whereas a slight counter-trend evident for the White sample may be a product of chance variation, this is unlikely to be the case for the Aboriginal sample, as virtually all eligible Aboriginal children in the district were

tested. This finding is especially noteworthy when the comparative absentee rates of children from each of the three schools (Table 7.7) and the sample distribution (Table 5.1) are taken into account. Bega and Bermagui primary schools have lower rates of Aboriginal absenteeism than Eden primary school, despite having proportionately more Aboriginal females attending them. Thus, both the school-based influences and the sex-based influences on Aboriginal absenteeism run counter to each other, and hence, are likely to be stronger than indicated in Tables 7.6 and 7.7. In the absence of statistically significant differences between the comparison groups (whether sex-based or school-based), however, the question of whether similar trends occur for Aboriginal children beyond the South Coast is unclear and, along with the causes and outcomes of such variations, requires further research. Significant school-based variations in attendance rates of the White children are not a concern of this inquiry, other than to note that White absenteeism was lowest at the school (Eden) which had the highest Aboriginal non-attendance rates.

Hypothesis 3(b) is supported only indirectly by the research. As noted above, the large gap between Aborigines and Whites in their culture of poverty involvement is matched by a similar gap between them in their average levels of attendance. The high levels of absenteeism displayed by the Aboriginal children, therefore, simply may represent another manifestation of the overall non-involvement of Aborigines in the institutional structure of Australian society. But when each ethnic group is considered separately, no relationship between culture of poverty involvement and absenteeism is evident. It is possible that the compulsory nature of school attendance may mitigate against a close relationship between both variables; but in the absence of direct evidence, the existence or otherwise of a relationship between them remains an open question.

Unlike its predecessor, Hypothesis 3(c) receives some direct support. There is a trend across both ethnic groups for absenteeism to be related negatively to scholastic status; but for the Aboriginal group this trend is significant with regard to ratings of ability levels only, and for the White group it is significant for application ratings only (although a strong trend also is evident for their reading abilities)(Table 7.22). A possible explanation of the findings for the White children is that their attendance rates reflect their general attitude to school work. Low attenders may have little interest and, therefore, poor application. But overall, the absentee rates of these children tend to be low and to show little variation. Hence, despite their lesser application, the low attenders may not miss sufficient schooling for it to affect adversely their classroom performance.

In contrast, the far greater range of absentee rates characteristic of the Aboriginal children may be sufficient to influence differentially their academic performance in the classroom (as rated by teachers). For the nine- and ten-year-olds, absentee rates are the most important predictor of reading ability ratings (Table 7.36). The trend for Aboriginal attendance to improve with age (Tables 7.8 and 7.22), however, is not matched by improved scholastic status (Tables 7.4 and 7.21) and, despite the significant difference between the attendance rates of Aboriginal, and White, males (Table 7.5), their ability ratings, as noted earlier, do not differ significantly (Table 7.2). It appears, therefore, that although absentee rates may distinguish well between Aboriginal pupils as regards their academic status, it may not be a major determinant of the overall level of their academic abilities (with the possible exception, noted above, of the reading abilities of the nine- and ten-year-olds).

An alternative explanation of the findings relating to Hypotheses 2(b) and 3(c) is that teachers, as indicated previously, may use different criteria when making subjective assessments of the scholastic status of the Aboriginal children and of the White children. As teachers probably are more aware of socioeconomic differences between the families of their White pupils than between those of their Aboriginal pupils,⁽¹⁾ their ratings of the abilities and application of the White children are more likely to be biased by such considerations than are their ratings of the Aboriginal children. On the other hand, the overall level of absenteeism of individual Aboriginal children would be well-known to the teachers, who may inadvertently be influenced in their assessments of the abilities of these children by this knowledge.

Thus, the close association between ability ratings and social background for the White children, and between ability ratings and absenteeism for the Aboriginal children, may be an outcome of the influence of these variables on teachers' perceptions of the children, rather than on the actual ability levels of the children. Examination of the relationships between scholastic status ratings and performance on the standardised tests of language and classificatory abilities should help overcome this uncertainty. However, such an examination must await discussion of Hypotheses 4(c) and 5(c) respectively.

8.5 LANGUAGE

The results reported in Table 7.9 provide strong support for Hypothesis 4(a). On each measure of language ability, and especially those directed towards assessing Standard English Mastery, the

(1) The CPS revealed, for example, that there was less contact between teachers and Aboriginal parents than between teachers and White parents.

performance of the Aboriginal children is significantly worse than that of the White children. This finding supports the conclusion reached in Chapter 3 that Aborigines not only tend to make little use of Standard English structures, but that they tend not to exploit language generally as intensively as do Europeans in the articulation and communication of concepts. More specifically, the study indicates that South Coast Aboriginal children, like those elsewhere, tend not to demonstrate the same language competencies as White comparison groups in contexts and on tasks attuned to Western schooling and hence, to contemporary Australian society. As noted in Chapter 3, this failure places these children at an enormous disadvantage in a society in which skilled language use plays such a vital role in so many fields.

Labov's (1970) contention, discussed in Chapter 3, that language performance in a test situation may not portray accurately language competence, however, cannot be overlooked. Despite attempts to minimise any threatening quality of the test situation by sampling relatively high-contact Aboriginal children who have considerable familiarity with White adults and with school contexts, and by the care taken in rapport-building prior to testing, some non-linguistic variables may have disadvantaged the Aboriginal children relative to the White children. For example, Aboriginal children attending Bermagui primary school, most of whom resided at Wallaga Lake, tended to exhibit more symptoms of stress during testing than children from elsewhere.⁽¹⁾ Their significantly lower levels of performance on the AA and VE tests, relative to the other Aboriginal children (Table 7.11), therefore, may be due in part to situational factors related to testing.

(1) Two younger children failed to respond to the tests and several others required considerable coaxing and much time to complete testing.

Alternatively, however, the comparative isolation of this group from the White community may mean they experience less pressure for language development than the other Aboriginal children. But such an explanation cannot account for the superior performance of the Bega children over the Eden children. Both groups have considerably more contact with the White community than do the Wallaga Lake children, and appeared more confident during testing. If CPS scores can be taken as a guide (Table 7.15), the Eden children have even more contact than the Bega children. In addition, as will be discussed more fully later in the Chapter, there is no relationship between the CPS scores of these children and their performance on the language tests. Variations in the test performance of these children, therefore, appear to be largely an outcome of differences between the schools they attend (Table 7.11). Thus, while it is probable that all three sources of influence contribute to Aboriginal test performance to varying degrees, depending on the amount of test experience the children have, the type of schooling they receive, and the level of sociocultural and residential isolation they experience, the findings of this study indicate that school-based influences are especially important.

The trend for the standardised scores of both the Aboriginal and White children on the VE to decline with age suggests that their language abilities, relative to age norms, may deteriorate as they grow older (Table 7.12). With the possible exception of the AA scores of the Aboriginal children, however, a similar trend does not occur for standardised scores on the tests assessing Mastery of Standard English. This may indicate that the Standard English usage of both groups either commences at (for the Aborigines), or quickly reaches (for the Whites), such a low base that it changes little thereafter.

In the absence of Australian norms for the ITPA subtests, however, it is premature to draw conclusions regarding this matter.

The tendency for Aboriginal males to perform better on the PPVT than Aboriginal females (Table 7.10) is surprising and its causes are not easily identified. It is possible that the higher school attendance rates of the males may have an influence (Table 7.6), but no overall association between PPVT scores and absentee rates is evident for the Aboriginal children (Table 7.22). Situational factors related to testing are unlikely to have had a differential effect, as no differences occur on other language tests. Possibly the male Aboriginal children have greater exposure to the items depicted in the test, or to White society generally, but there is no evidence for such an interpretation. Nevertheless, the finding does indicate that Aboriginal males have greater knowledge of Standard English vocabulary than do Aboriginal females. As chance error also is a possibility, such a conclusion must be treated with caution, pending further research.

Hypothesis 4(b) receives some support in the case of the White children, but not for the Aboriginal children. Thus, whereas there is a consistent trend for scores on each language measure to correlate negatively with CPS scores for the White children, no relationship is evident between them for the Aboriginal children (Table 7.31). This negative association between the CPS scores of the White children and their performance on the language tests is especially strong with regard to the PPVT, but less so for the VE and minimal for the AA.

These results may mean that the language abilities of Aboriginal children are unrelated to their families' involvement in the culture of poverty. Alternatively, however, if taken in conjunction with the findings already discussed (Tables 7.9 and 7.13), they could indicate that, although the sociocultural gap between Aborigines and Whites may be sufficiently great to produce significant variations between them in their respective language abilities, sociocultural differences between Aboriginal families only, unlike those between White families, may not be sufficient to have a similar effect. In other words, the Aboriginal families 'en masse' may be so immersed in the culture of poverty that sociocultural variations between them have little effect on the development of language abilities. This interpretation is supported by the small standard deviation of Aboriginal CPS scores (4.18) relative to a mean of 22.89, which contrasts with the proportionately greater variation of White CPS scores (S.D. = 4.97) relative to a mean of only 7.88.

Optionally, however, these findings simply may indicate that the CPS is not sufficiently precise to make distinctions between Aboriginal families that are fine enough to enable the influence of their varying degrees of involvement in the culture of poverty, on language test performance, to be detected. If so, some modifications to the scale to increase its sensitivity to such variations is warranted. More precise information concerning income and expenditure, or a more highly graduated index of isolation, for example, may be required.

The scale is sufficiently sensitive, however, to detect varying sociocultural influences on the language abilities of the White children. In particular, it indicates a strong inverse relationship between a child's capacity to distinguish pictorial representations of

Standard English vocabulary (PPVT) and his family's participation in the culture of poverty. Although only approaching criterial significance, the negative correlation between CPS scores and VE scores also indicates that language use generally is inversely related to culture of poverty involvement. This finding supports the view of cultural deficit theorists (Deutsch, 1967), but its failure to reach criterial significance means that chance error, although unlikely, cannot be ruled out.

The relatively weak negative association between the AA and CPS scores of the White children may indicate that basic competencies such as classification, which underlie performance on the AA, may be less influenced by the culture of poverty involvement of the families of these children than is Mastery of Standard English alone. This view receives support from the non-association between the Matrices and CPS scores of these children (Table 7.33), which is discussed more fully later in the Chapter.

A more likely explanation, however, is that the finding reflects a premature cut-off point for White Australian children on the AA between items twenty-two and twenty-four, found by Teasdale and his colleagues (1978), as most children in the study who reached these items had greater difficulty with them than with several following items. This interpretation is supported by the high positive correlation between the AA scores of the White children and their absentee rates (Table 7.22) and from the negative relationship between the AA scores of the White six- and seven-year-olds and their ratings of reading ability and scholastic application (Tables 7.35 and 7.37), both of which are highly unlikely and suggest that the scores may be aberrant. As few Aboriginal children performed at levels high enough to reach these critical items, their average levels of performance would have been little affected by them.

Hypothesis 4(c), like Hypothesis 4(b) above, receives differential support from the results for each ethnic group. In this case, however, the findings for the Aboriginal group tend to support the Hypothesis, while those for the White children do not. Thus, while a clear trend is evident for a strong positive association between language performance and scholastic status for the Aborigines, this is not the case for the White group (Table 7.24).

This trend for the Aboriginal children is especially strong between ratings of their number and reading abilities and their AA and VE scores, suggesting that basic cognitive functions underlying performance on each of these measures may be more important as determinants of scholastic status than is knowledge of Standard English vocabulary (as assessed by the PPVT), which is related positively (but not significantly) only to ratings of their reading abilities. For the younger Aboriginal children, VE scores are next in relative importance behind CPS scores as predictors of ratings on each index of scholastic status (Tables 7.35 to 7.37). The high positive correlation between the AA scores and application ratings of the Aboriginal children indicate that children with the classificatory structures and Standard English Mastery required to do well on the test also try harder at school work. Performance on the test also is the major predictor (in relative terms) of the number ability ratings of the older Aboriginal children (Table 7.35).

In contrast, weak positive links between ratings of the number abilities of the White children and their performance on the PPVT and AA only are evident, and these fail to achieve criterial significance. The AA scores for the younger White children are second in relative importance (behind CPS scores) as predictors of ratings in

their reading ability and scholastic application (Tables 7.36 and 7.37), but, as has been noted, the relationship is negative and some doubt surrounds the AA results of the White children.

Overall, however, these findings indicate either that there is a substantial mismatch between language test performance and classroom performance, or that teacher ratings are inadequate as a means of assessing the academic abilities of the White children. Support for the first explanation comes from the lack of significant intercorrelations between the language test scores of this group, which indicates that consistency of performance over a broad academic sphere may not be a characteristic of these children. Alternatively, in line with the 'Pygmalion effect' referred to previously, teacher expectations may be influencing actual performance in the classroom. Thus, if teachers expect children from families that score highly on the CPS to do poorly at school, then they may inadvertently contribute to the fulfilment of these expectations, even though the children may be capable of doing better. If confirmed, this explanation indicates that teacher attitudes could, unwittingly but seriously, be hampering the academic progress of these children, and highlights the need for a radical change in such attitudes.

A more probable interpretation of the findings, however, is that they cast some doubt on the validity of teacher ratings as a means of assessing the number and language abilities of these children. In the view of this author, it is highly unlikely that performance on the language tests would not display a strong positive relationship to classroom performance. It is probable, therefore, that variables other than classroom performance have an important bearing on subjective assessments by teachers of the abilities of these low-socioeconomic

White children. As indicated earlier, the negative association between ability ratings of these children and the CPS scores of their families suggests that sociocultural considerations especially are important. The high positive correlations between the language test performance and ability ratings of the Aboriginal children, on the other hand, indicate that subjective assessments by teachers are valid as measures of the academic abilities of these children.

Despite the lack of criterial significance accompanying the intercorrelations between the language test scores of the White children, referred to above, the pattern of correlations is the same as for the Aboriginal group, for whom the intercorrelations do achieve or approach criterial significance. In particular, there is a tendency for AA scores to correlate more highly with scores on both the VE and PPVT than do scores on the latter two tests with each other.

Though some doubt exists concerning the AA scores of the White children, this finding suggests that competencies underlying performance on the AA may have affinities with those underlying performances on each of the other two tests; but that competencies underlying performance on the PPVT and VE have little in common, at least as far as the Aboriginal children are concerned. This supports the view that Standard English Mastery acts as a common denominator for the AA and PPVT but not the VE, whereas more general cognitive structures may underlie performance on the AA and VE.

8.6 CLASSIFICATORY ABILITIES

As with some previous hypotheses, Hypothesis 5(a) received partial support only. As expected, no significant difference occurs between the Aboriginal and White children in classificatory ability as

assessed by the Nixon Test; but a highly significant difference is evident between their scores on the Matrices Test (Table 7.9).

The results for the Nixon Test support the findings of previous research comparing the cognitive abilities of low-socioeconomic European children and 'high-contact' Aboriginal children. They indicate that the basic levels of cognitive functioning of both groups are similar. This finding is consistent with Hypothesis 5(a), and contrasts sharply with the findings concerning the language abilities of both groups. It also contrasts sharply with the results for the Matrices Test, on which the White children performed significantly better than did the Aboriginal children.

The contrasting results for both tests may indicate that a marked deterioration with age takes place in the classificatory ability of Aboriginal children relative to the abilities of White children. The finding is similar to the findings of de Lemos and others, referred to in Chapter 2, who have suggested that the development of logical thought in Aboriginal children may lag behind its development in White children. Such a lag, if it does occur, has serious implications for the scholastic success of these children, especially in fields requiring reasoning and mathematical skills. It may account for the consistent findings, noted in Chapter 1, that Aboriginal children do poorly in mathematics; and may help to explain the tendency, already noted, for the number ability ratings of the Aboriginal children in this study to be related negatively to age.

But, as with some earlier findings in this study, these results may be a product of the gauges used in the study. The Nixon Test requires the grouping of three-dimensional objects. The Matrices Test, on the other hand, involves the completion of groupings of

two-dimensional representations of objects. In addition to assessing multiple classificatory performance, therefore, the Matrices Test assesses the capacity to deal with these two-dimensional representations, and as Sigel (1970) points out, this capacity may vary between sociocultural groups. It is possible, therefore, that the older Aboriginal, and White, children simply may vary from each other, according to their respective abilities to manipulate conceptually pictures of objects that are closely attuned to the requirements of schooling and middle-class culture, rather than according to more basic classificatory abilities.

Such an interpretation supports de Lacey's (1979) proposal for a two-tiered model of cognitive development. In his view, basic cognitive structures common to all of mankind occupy the lower strata, and more culturally refined structures occupy the higher levels. For Aboriginal children who need to compete successfully in Australian society, however, the outcome is the same, whether they lag in the development of logical thought, or in the ability to deal with two-dimensional images. They are seriously disadvantaged relative to other groups in Australian society; doubly so if their language abilities relative to the abilities of White children are taken into account.

The Hypothesis, 5(b), that classificatory performance is unrelated to culture of poverty involvement tends not to be supported by the results reported in Table 7.33. High negative correlations occur between the CPS scores and both the Nixon and Matrices scores of the Aboriginal group and between the CPS scores and Nixon (but not Matrices) scores of the White group. However, the limited age range of each test, and the sampling restrictions on the Wallaga Lake CPS

scores, reduced the numbers for whom scores on both gauges in each correlation could be obtained. Thus, only the CPS x Matrices correlation for the Aboriginal children achieves criterial significance.

Although only approaching criterial significance, the trend for Aboriginal children at Bermagui to score less well on each classificatory test, and those at Eden to score best (Table 7.11), adds support to the view that culture of poverty involvement and classificatory performance are related. As has been pointed out, the Wallaga Lake Aboriginal families whose children attend Bermagui school are likely to have scored higher on the CPS than did the Bega Aborigines, who, in turn, scored more highly than the Eden group. It is probable, therefore, that the reverse trend which occurs for scores on both classificatory gauges, reflects these sociocultural variations rather than school-based variations, as appeared to be the case for language test performance.

Against this interpretation, however, is the finding that, despite the large gap between Aborigines and Whites in their CPS scores (Table 7.13), there is no significant difference between them in their Nixon Text performance (Table 7.9). Also, the small numbers involved in, and the lack of statistical significance accompanying, the negative correlations between the Nixon and CPS scores (Table 7.33) of both sets of children mean that the probability of chance error is fairly high.

Some qualification also is necessary concerning the significant negative correlation between the CPS and Matrices scores of the Aboriginal children. It is not supported by a similar correlation for the White group, and it leaves open the question of whether involvement in the culture of poverty is related to multiple classificatory ability or only to pictorial classificatory ability for the older Aboriginal children. Nevertheless, though the possibility of chance error cannot be ruled out, the evidence is sufficiently strong to indicate that, for the Aboriginal children at least, a relationship between a child's cognitive development and his family's participation in the culture of poverty is likely, and that, therefore, future research with larger samples, and perhaps with a modified version of the CPS (along the lines noted previously), is warranted.

Hypothesis 5(c), the expectation that classificatory performance will be positively related to scholastic status, receives no support for the White group but strong support for the Aboriginal group. Thus, for the White children no correlation between scores on either of the classificatory tests and ratings on any index of scholastic status even approaches criterial significance (Table 7.25). The only correlation of note that does occur is between their Nixon Test scores and ratings of their number abilities which, as multiple regression analysis reveals, places the Nixon scores behind only the CPS scores in relative importance as a predictor of number ability ratings (Table 7.35); but the relationship is negative. As an inverse relationship between a child's level of logical thought development and his mathematical performance in the classroom is even more unlikely than no relationship, these findings support those for the language tests, which indicate that teacher ratings of the scholastic status of the

low-socioeconomic White children in the study may not accurately reflect the classroom performance of these children.

But this appears not to be the case for the Aboriginal children. As with their performance on the AA and VE (Table 7.24), their performance on both classificatory tests has a strong positive correlation with ratings of their scholastic abilities (Table 7.25). For the older Aboriginal children, Matrices scores are second in relative importance as predictors of both their number abilities (behind AA scores) and reading abilities (behind absentee rates). These findings reinforce the view that teacher ratings of the number and language abilities of the Aboriginal children, unlike the ability ratings of the White children, do reflect their actual classroom performance.

The strength of the association between performance on the Nixon Test and the ability ratings of the Aboriginal children becomes evident, however, only when the effects of absenteeism are held constant. This finding reflects both the high positive correlation between the Nixon scores of these children and their absentee rates, and the negative association between their absentee rates and their scholastic status ratings (Table 7.22). The reason for the former (positive) correlation is not clear. It is possible that a causative link exists between absenteeism and higher levels of cognitive development.⁽¹⁾ But such an occurrence is highly unlikely and runs counter to other studies which have demonstrated a positive link between exposure to Western schooling and performance on tests of cognition (Laurendeau-Bendavid, 1977; Stevenson et al., 1978). A more

(1) The cognitively more advanced Aboriginal children in the younger age groups, for example, may 'wag' school more often than other Aboriginal children of similar age.

probable explanation, therefore, is that the close positive association between the Nixon scores and absentee rates of these children is a product of chance covariation. The high cognitive scores of the Eden Aboriginal children relative to the other Aboriginal groups (Table 7.11), for example, is likely to be causally linked to the lesser involvement of their families in the culture of poverty. But their high absentee rates relative to the other groups (Table 7.7) is probably a consequence of school-based (or sex-based) influences, as has already been discussed.

The trend across both ethnic groups for Nixon Test scores to be more highly correlated than the Matrices scores with performance on each of the language scales (Table 7.29) supports the view that the Nixon Test may be assessing a more broadly-based cognitive capacity than the Matrices Test. In addition, as noted earlier, the significant positive correlation between the Nixon scores and AA scores found for both groups, but especially for the Aborigines, supports the view that the AA assesses classificatory abilities as well as Standard English Mastery. The positive association between the Nixon scores and the PPVT scores for each group similarly may indicate that performance on the PPVT requires more than knowledge of Standard English vocabulary. The ability to discriminate between like alternatives, for example, also may be tapped. But as the correlation for the White group only approaches criterial significance, this indication is weaker than for the AA. Similarly, the fairly high positive Nixon x VE correlations fail to achieve significance for either group, perhaps due to small sample sizes. Consequently, they too require substantiation from future research.

In contrast to the Nixon results, the Matrices scores show little relationship to performance on the language tests. The only correlation to approach significance involves the PPVT scores of the Aboriginal children and it is negative. Apparently, therefore, there is little relationship between language competencies and the competencies required for pictorial classification.

However, sex differences in performance on the Matrices Test also may help explain this lack of association. Across both ethnic groups there is a trend for females to perform better on the test than do males (Table 7.10). Although this trend achieves significance only when both groups are combined, it runs counter to the trend for the PPVT and this may explain the negative correlation between both measures for the Aboriginal groups (Table 7.29).

As with the PPVT results, however, the reasons for this sex-based difference in performance on the Matrices Test is difficult to determine. It is unlikely that the objects represented in the Matrices Test are more familiar to females than to males while the reverse is the case for the objects depicted on the PPVT. Although both occurrences are possible, it also is unlikely that females are more advanced than males in terms of pictorial classificatory ability, but less advanced than males in terms of the ability to recognise and name pictures of objects. The most likely explanation for the sex-based differences, therefore, is that they are chance occurrences, though, as we shall see, locus-of-control orientation also may play a role.

8.7 LOCUS-OF-CONTROL ORIENTATION

Trends for scores on both locus-of-control scales show considerable diversity, with no hypothesis relating to them receiving unqualified support. Thus, a trend for White males to give more externally-oriented responses than Aboriginal males on the PPNS contrasts with a trend for White females to exhibit less externality than Aboriginal females on the CNS (Table 7.17). In neither case, however, do these trends achieve statistical significance, nor do any other comparisons between both ethnic groups. The Hypothesis 6(a), that there are significant differences in locus-of-control orientation between the Aboriginal and White children, therefore, is not supported.

This finding reinforces that found by Wright and Parker (1978), but runs counter to the expectations arising from the higher involvement of Aborigines in the culture of poverty, and from previous research with minority groups. It indicates that high-contact Aborigines and low-socioeconomic Whites have similar feelings of personal autonomy.

This lack of association between the scores of the Aboriginal children on the two locus-of-control scales and their families' CPS scores also is evidenced in the findings presented in Table 7.34, which show that they have a correlation coefficient that is close to zero. In contrast, however, highly significant correlations occur between the two sets of variables for the White children. But the direction of these relationships is reversed for each locus-of-control measure. For the PPNS it is positive, and for the CNS it is negative. Hypothesis 6(b), the expectation that culture of poverty involvement is related to externality, therefore, is supported only by the results for the White six- to eight-year-old children.

The reasons for these differing trends across ethnic groups and across age groups (in the case of the White children), are not immediately apparent. While it is possible that culture of poverty involvement may be related to locus-of-control orientation for White children but not for Aboriginal children, it is unlikely that this involvement would generate a locus-of-control orientation in younger White children that is the reverse of that for the older White children. Nevertheless, as so many questions in both scales are virtually identical, it is doubtful that the two inventories are assessing different dimensions of personality in the way the two classificatory gauges may be assessing different dimensions of cognition. Given the statistical significance of the counter-directional correlations for each age group and the studies supporting the validity and reliability of the scales (Nowicki and Strickland, 1973), therefore, the possibility of marked variation with age in the influence of culture of poverty involvement on the locus-of-control orientation of these children cannot be overlooked. Perhaps this involvement accentuates a usual trend for children to develop a more internal locus-of-control orientation as they grow older (Nowicki and Strickland, 1973).

Alternatively, although challenged by Nowicki and Strickland (1973), some studies have suggested a close relationship between performance on these locus-of-control scales and on social desirability scales. The results, therefore, simply may be assessing changes with age in what these children regard as socially desirable responses. In addition, the samples involved in the correlations tend to be small and thus may be atypical. Both the heterogeneity of the results and alternative interpretations of them, therefore, will be discussed more fully after trends for other comparison groups and for interactions with other variables have been examined.

In contrast to the expectations arising from Hypothesis 6(c), a general trend is evident for the locus-of-control scale scores of the Aboriginal children to be associated positively with their scholastic status ratings (Table 7.26). The strength of this trend increases when the effects of absenteeism as well as of age are held constant, especially with regard to the ability ratings of the younger children.⁽¹⁾ The consistency of these findings indicates that externality may be a feature of Aboriginal children who do well at school. If so, it contrasts with the usual findings with European children, that successful school performance is related to internality (Nowicki and Strickland, 1973). Perhaps Aboriginal children with an external locus-of-control orientation are more sensitive to reinforcement contingencies associated with classroom activities, which leads them to try harder and hence to perform better, than children who are less sensitive to these contingencies. None of the correlations achieve statistical significance, however, and the results of the multiple regression analysis indicate that, at best, locus-of-control orientation is third in relative importance as a predictor of reading ability and scholastic application ratings for the older children only (Tables 7.36 and 7.37). The evidence is insufficiently strong, therefore, to draw firm conclusions regarding this matter.

The results for the White children tend to support Hypothesis 6(c). Without exception, the locus-of-control scale scores of these children correlate negatively with their scholastic status ratings. The trend is stronger for the older children (Table 7.26) for whom CNS scores are second in relative importance as predictors of both number

(1) The link between the absentee rates and locus-of-control orientation of these children is further evidenced by a high positive correlation between their PPNS scores and their absentee rates reported in Table 7.22.

and language ability ratings (Tables 7.35 and 7.36). But criterial significance is attained only for the CNS x reading ability correlation (Table 7.26). The evidence for a link between higher scholastic status and an internal locus-of-control orientation for these children, therefore, tends to be stronger than the evidence linking externality and scholastic status for the Aboriginal children and, as noted above, it is supported by previous research. But, like the findings for the Aboriginal group, these findings are indicative of trends only, and are insufficiently strong (with the possible exception of the White CNS x reading ability correlation) to warrant unqualified acceptance. The lack of significant negative correlations between the application ratings of both groups and their scores on the two scales do not support the claim made by Nowicki and Strickland (1973) that persistence at tasks is positively related to an internal locus-of-control orientation.

Although varying between both ethnic groups, the directional consistency within each group of correlations noted between scholastic status ratings on both locus-of-control scales tends to be atypical. Usually the results for the two locus-of-control scales are marked by their lack of consistency, as evidenced in the discussions relating to Hypotheses 6(a) and 6(b). Thus, rarely are differences between comparison groups consistent for both gauges, and rarely do the scores on both scales correspond in their interactions with other variables.

The interrelationships between scores on both locus-of-control scales and performance on the language and classificatory tests are no exception. For both ethnic groups there tends to be little relationship between language test performance and locus-of-control orientation (Table 7.30); but this pattern is disrupted by a highly

significant negative correlation between the CNS and PPVT scores for the Aboriginal children. In addition, positive correlations between the VE and PPNS scores of the Aboriginal children and between the VE and CNS scores of the White children approach criterial significance.

Positive correlations also occur between Nixon and PPNS scores for both groups, and between the Matrices and PPNS scores of the Aboriginal group, but sample numbers are small and none of the correlations achieve significance (Table 7.32). In contrast, the CNS and Matrices scores of both groups have negative correlations that either approach (for the Aborigines) or achieve (for the Whites) criterial significance. A negative correlation between the Matrices and PPNS scores of the White eight-year-olds, however, fails to achieve or approach significance.

Much of this variability in results for the two locus-of-control gauges appears to be due to sex-based differences. When the scores of both ethnic groups are combined, there are statistically significant trends for females to exhibit greater 'externality' on the PPNS, but greater 'internality' on the CNS. For the Aborigines, the trends are significant only for the PPNS, and for the Whites they are significant only for the CNS (Table 7.18). A significant positive correlation between the PPNS scores of Aboriginal children and their absentee rates, therefore, is likely to be an outcome of the higher absentee rates of Aboriginal females who score significantly higher than males on the PPNS. The high negative correlations between the Matrices and CNS scores of both groups may be explained similarly, as females tend to do better than males on the Matrices, but score less highly on the CNS. The significant negative correlation between the PPVT and CNS scores of the Aborigines is less easily

explained, however, as females tend to score less well than males on both scales. Perhaps the slight difference between the sexes on the CNS is insufficient to counteract the considerable difference between them in PPVT scores.

The reasons for this apparent reversal in locus-of-control orientation between males and females relative to each other are uncertain. The finding does not make clear whether the reversal is attributable primarily to a trend towards increasing externality on the part of the males, or towards increasing internality on the part of the females, or both. In addition, it runs counter to findings, either of no difference between the sexes in their locus-of-control orientation (Nowicki and Strickland, 1973), or for females to exhibit greater externality only (Rotter, 1966). Perhaps females of low-socioeconomic families, whether Aboriginal or White, acquire greater 'internality' relative to males as part of a socialisation process which enables them to exercise considerable influence over household matters, and to act in the not-uncommon role of sole household head. Males, on the other hand, are likely to have little control over affairs in their workplace or elsewhere, and hence may have less need of an internal locus-of-control orientation.

Such an interpretation is speculative, however, and its acceptance must await further research. The results simply may be a product of an atypical sample in which a relatively small number of younger (or older) males (or females) exhibit unusually high (or low) externality. More probably, however, they may indicate that one or both scales are not valid indicators of locus-of-control orientation in Aboriginal or low-socioeconomic White Australian children. Most studies investigating the validity of the scales have been conducted

in the United States of America, using the full forty-item version of the scale. The abbreviated versions for the younger and older children represent subsets of this scale, and thus may not tap locus-of-control orientation as adequately as would the full scale. Alternatively, as the items were selected initially on the basis of judgements by school teachers (Nowicki and Strickland, 1973), they may contain a middle-class bias which fails to tap locus-of-control orientation in non-middle-class Australian children. As already noted, they may, for example, be tapping social desirability.⁽¹⁾

In addition, whereas questions in the PPNS were pitched such that some required a 'yes' answer and others a 'no' answer to indicate externality, those in the CNS always required a 'yes' answer. The different phrasing of these questions, therefore, may have influenced responses, despite the inclusion of 'social desirability' questions designed to disrupt possible response sets. Slight variations in administrative procedures from those used by Nowicki and Strickland (1973) also may have influenced results. Thus respondents were required to answer questions verbally in a face-to-face situation with the tester, rather than in written form by themselves. For the PPNS, this procedure precluded the use of pictorial aids. Although such variations were warranted in view of the anticipated poor reading skills of many of the children, their effects on performance are uncertain. In view of these qualifications and of the overall inconsistent nature of the findings, therefore, some doubt exists concerning the results for the two scales.

(1) The social desirability questions included in the locus-of-control scales represented an incomplete part of a social desirability questionnaire and were too few in number for correlations between responses to them and to questions of the locus-of-control scales to be meaningful.

8.8 SUMMARY AND CONCLUSION

In summary, the results just discussed provide firm quantitative support for the conclusion reached in Chapter 6, that South Coast Aborigines have evolved a distinct subculture that has similarities with the culture of poverty as described by Oscar Lewis. They demonstrate that Aboriginal families in the region exhibit many more of these characteristics than do local low-socioeconomic, White Australian families.⁽¹⁾

But in view of the doubt that exists concerning the validity of teacher ratings as a means of assessing the number and reading abilities of the White children,⁽²⁾ the question of whether or not significant differences in scholastic status between Aborigines and Whites⁽³⁾ occur as a direct result of their sociocultural differences, remains unresolved. When Aboriginal children, for whom the scholastic ability ratings do appear to be valid,⁽⁴⁾ are considered alone, however, there does appear to be a negative association between their families' CPS scores and their ability ratings; but the correlations fail to achieve statistical significance⁽⁵⁾ and the strong negative association found for the young children is not repeated for the older children.⁽⁶⁾ The evidence for a direct link between the scholastic status of the Aboriginal children and their families' involvement in the culture of poverty, therefore, is weaker than was anticipated.

Nevertheless, there does appear to be a strong indirect link between both variables. The scholastic ability ratings of the Aboriginal children show a statistically significant positive association with their performance on both classificatory gauges;⁽⁷⁾ and

(1) Table 7.13.

(2) Tables 7.24; 7.25.

(3) Table 7.2.

(4) Tables 7.24; 7.25.

(5) Table 7.27.

(6) Tables 7.35; 7.36.

(7) Table 7.25.

contrary to expectations, an inverse relationship appears to exist between the cognitive development of these children, as manifest in their classificatory performance, and their families' participation in the culture of poverty.⁽¹⁾ Indirectly, therefore, an Aboriginal child's academic performance at school may suffer as a consequence of his family's level of involvement in the culture of poverty because of the adverse effects this involvement has on his cognitive development (or, at least, on his capacity to demonstrate cognitive competencies).

Possibly reflecting the reduced sample size for which data was available on both Nixon Test performance and culture of poverty involvement, however, the high negative correlation between both variables for the Aboriginal children fails to achieve statistical significance.⁽²⁾ In addition, despite the large sociocultural gap between the Aboriginal children and the White children in the study (as assessed by their families' CPS scores),⁽³⁾ the difference between both groups in their Nixon Test performances also fails to achieve statistical significance (although it does approach it).⁽⁴⁾ More research is required, therefore, to determine whether culture of poverty involvement is related negatively only to the development and expression of cognitive abilities that are closely attuned to the demands of the school environment (as in the capacity to classify two-dimensional representations of objects according to two or more criteria), or to the development and expression of more general cognitive abilities (such as the capacity to reclassify the same three-dimensional objects using a different, but a single criterion each

(1) Tables 7.33, 7.15 and 7.11. (The latter two tables show the reversal of trends between the classificatory scores and the expected CPS scores if more Wallaga Lake residents had been sampled.)

(2) Table 7.33.

(3) Table 7.13.

(4) Table 7.9.

time) as well. Possible links between the family background of the White children and their capacity to demonstrate basic forms of logical thought,⁽¹⁾ and between the type of schooling received by the Aboriginal children and their performance on tasks requiring classificatory competence⁽²⁾ also require further investigation.

The scholastic ability ratings of the Aboriginal children also tend to be related positively to their performance on the language tests.⁽³⁾ But unlike their classificatory test performance, and again, contrary to expectations, variations between the Aboriginal children in their language test performance show no relationship to their families' level of participation in the culture of poverty.⁽⁴⁾ Rather, the evidence indicates that these variations are related to differences between the schools attended by the children⁽⁵⁾ and hence, by implication, that they reflect variations in the type of schooling the children receive. Discounting the aberrant AA scores, a similar but statistically not significant, pattern of school-related variations in language test performance also is evident for the White children;⁽⁶⁾ but unlike the finding for the Aboriginal children, a strong negative association also is apparent between the demonstrated language competencies of these children (on the PPVT and possibly the VE) and their families' participation in the culture of poverty.⁽⁷⁾ Thus, whereas home-based influences tend to be the primary contributor to variations in the language test performance of the White children, school-based influences appear to be the major determinant of variations in the language test performance of the Aboriginal children.

(1) Table 7.33.

(2) Table 7.11.

(3) Table 7.24.

(4) Table 7.31.

(5) Table 7.11.

(6) Table 7.11.

(7) Table 7.31.

The findings also indicate that the lesser mastery of Standard English of the Aboriginal children compared to the low-socioeconomic White children, is likely to be an outcome of their lower level of language use generally.⁽¹⁾ In addition, the finding, that in contrast to the situation for the White children, differential levels of Standard English Mastery by Aboriginal children are not an outcome of varying levels of participation by their families in the culture of poverty, may indicate that these children experience greater and more uniform dialectal variation from Standard English than do the White children. But in the absence of direct evidence, the question of whether or not the vocabulary and transformational rules they use differ more from Standard English forms than do those used by the low-socioeconomic White children remains open.

It is possible that the findings of no relationships between the language test performance of the Aboriginal children and their families' involvement in the culture of poverty,⁽²⁾ and between the two-dimensional classificatory performance of the White children and the level of participation by their families in the culture of poverty,⁽³⁾ indicate simply that the CPS is insufficiently precise to detect the effects on test performance of sociocultural variations between members of the same communities. But this is unlikely to be the case, in view of the adequacy of the CPS in detecting significant relationships between culture of poverty involvement and two-dimensional classificatory performance for the Aboriginal children⁽⁴⁾ and between culture of poverty involvement and vocabulary knowledge for the White

(1) Table 7.9.

(2) Table 7.31.

(3) Table 7.33.

(4) Table 7.33.

children,⁽¹⁾ as well as for detecting strong and consistent (but not statistically significant) relationships between the performance of the White children on the other two language tests and their families' culture of poverty involvement,⁽²⁾ and between the three-dimensional classificatory performance of both groups and their families' participation in the subculture.⁽³⁾

The reasons for the variations in trends for each ethnic group are unclear, but may be a product of the far greater overall involvement of Aboriginal families in the culture of poverty, and lesser variation between them (relative to their level of participation) than is the case for the White families. Although the consistency of trends for each ethnic group suggests otherwise, chance error also may have contributed to the results, owing to the reduced sample sizes for which data from both the CPS and the classificatory and language tests were available. More research is required, therefore, to verify the relationships indicated above, and in particular, to explore further the strong or consistent trends for each ethnic group which approached but failed to reach criterial statistical significance.

The only variable, in addition to their language and logical abilities, which appears to have an important bearing on the scholastic status of the Aboriginal children is their level of absenteeism,⁽⁴⁾ which averages far higher than for the White children, and which shows considerably more variation than the absentee rates of the White children.⁽⁵⁾ The results indicate that it is independent of culture of poverty involvement when each ethnic group is considered separately,⁽⁶⁾

(1) Table 7.31.

(2) Table 7.31.

(3) Table 7.33.

(4) Table 7.34.

(5) Table 7.5.

(6) Table 7.22.

but sensitive to school-based⁽¹⁾ and to sex-based⁽²⁾ influences.

The expectation that culture of poverty involvement produces a sense of dependence and helplessness in individuals, as manifest in an external locus-of-control orientation, is not supported by the results for the Aboriginal children;⁽³⁾ nor is the anticipated negative relationship between their scholastic status ratings and 'externality' in their locus-of-control orientation.⁽⁴⁾ In fact, the reverse is indicated (though the trends are not statistically significant). For the White children, however, there is, as expected, a negative association between their scholastic status ratings and 'externality', especially for the older children.⁽⁵⁾ The locus-of-control/culture of poverty relationship for these children, however, is ambiguous. It may change from positive to negative as the children grow older.⁽⁶⁾ Age-related variations in the relative locus-of-control orientation of males and females in both ethnic groups also is evident, with females moving from an external to an internal orientation with age, relative to the orientation of males.⁽⁷⁾ But, as with the scholastic ability ratings of the White children, some uncertainty exists concerning the results for the two locus-of-control scales (for both ethnic groups). Firm conclusions regarding locus-of-control orientation, therefore, cannot be drawn.

In conclusion, the quantitative results presented in Chapter 7 show significant differences between the Aboriginal children and the White children sampled in this study, with regard to their families' involvement in the culture of poverty; their performance on tasks

(1) Table 7.7.

(2) Table 7.6.

(3) Table 7.34.

(4) Table 7.26.

(5) Tables 7.26; 7.35; 7.36.

(6) Table 7.34.

(7) Table 7.18.

requiring the classification of pictorial representations of objects using two or more criteria; their performance on the language tests; and their absentee rates from school. A trend towards superior performance by the White children on tasks requiring the reclassification of three-dimensional objects, using a single criterion on each occasion, failed to achieve statistical significance. In view of the doubt concerning the scholastic ability ratings of the White children, and the locus-of-control scale scores of both groups, no conclusions regarding comparisons between both sets of children on these variables are possible.

With regard to the interactions between the variables, the results indicate that the scholastic status of the Aboriginal children reflects their language and logical abilities, their levels of absenteeism from school and, for the younger children at least, the levels of involvement of their families in the culture of poverty. Their absentee rates and their performance on the language tests, in turn appear to reflect influences that vary according to the school they attend. Their absentee rates appear, as well, to be sensitive to sex-based influences. Although variations in the type of schooling received by the children also may influence their classificatory performance, the weight of evidence suggests that the level of involvement in the culture of poverty is the major influence on performance. More research is required, however, to determine whether or not this relationship is restricted only to school-related two-dimensional classificatory tasks, or to more basic three-dimensional tasks as well.

The implications of these findings, and of the conclusions reached in earlier theoretical Chapters, for social and educational policies, practices and research are discussed in Chapter 9, in which an attempt is made to synthesise the varying perspectives, findings and conclusions of this inquiry.

CHAPTER 9

CONCLUSION

9.1 INTRODUCTION

A major goal of this inquiry has been to shed light on the nature of influences impeding Aboriginal children from performing well at school, especially at tasks requiring number and language skills. Towards this end, theoretical positions and relevant research relating to the culture, cognition and language of these children was examined critically, and pertinent sociohistorical and quantitative data on Aborigines living in coastal regions in southern New South Wales were gathered and analysed. The conclusions drawn as a consequence of these undertakings, and their implications for research and practice relating to Aboriginal education, are discussed below. In conclusion, there is a summary statement on the deficit-difference controversy.

9.2 THE INTERDISCIPLINARY IMPERATIVE

Perhaps the most important conclusion deriving from the discussion of theory and research relating to Aboriginal cognition (Chapter 2) is the complexity of biological-environmental interactions that contribute to the psychological make-up of the adapting human organism. The conceptual dissection of this interacting system into discrete components introduces distortions into our understanding of this system. But, given the apparent human need, discussed in Chapter 2, to segment experience into identifiable patterns or units of information, such distortions are to some extent, perhaps, inevitable.

Nevertheless, an advantage of interdisciplinary syntheses, as attempted in this inquiry, is their uncovering and reduction of distortions accompanying the compartmentalisation of reality imposed by the various disciplines. Freed from such constraints, understandings that

are more comprehensive and which more closely approximate external reality are possible. Future interdisciplinary investigations of problems and issues relating to Aboriginal education clearly are a priority.

Indeed, the acceptance by many theorists and researchers that a dynamic interplay occurs between culture, cognition and language is a consequence, in large measure, of the synthesis by Jean Piaget of several disciplinary perspectives to which he was exposed. In particular, Piaget's identification of four ingredients shaping cognitive development has illuminated its dynamic and adaptive nature.

9.3 COGNITION AND CULTURALISATION

As pointed out in Chapter 2, these ingredients include genetically generated and environmentally fuelled maturation processes, autoregulatory or equilibration processes, socialisation processes, and what may be called 'culturalisation processes'. The concept of socialisation is used here in the restricted sense of 'interpersonal co-ordination' or the "constants of interpersonal exchange" (Dasen, 1977, p.3), rather than in the usual broader sociological sense in which it is not differentiated from culturalisation. The latter term, on the other hand, refers to the adoption by children of culturally distinctive characteristics - the cultural variants of interpersonal exchange. This is the ingredient which appears to hold the key to understanding differences between Aboriginal and White children in their cognitive and language abilities, and hence, in their scholastic status.

Autoregulatory and socialisation processes are likely to be identical for Aboriginal and White children and, although the possibility of genetically linked maturational variations between both groups cannot be dismissed, the weight of theoretical and empirical evidence presented and reviewed in this inquiry suggests that culturalisation differences account for most of the variation between both sets of children in cognitive and language performance. In particular, the contents of classifications and relations, and the contexts in which competencies are activated and demonstrated, appear subject to subcultural dictates. Thus the content and degree of conceptual compartmentalisations and systematisations that differentiate the cognitive reconstructions of reality of one sociocultural group from those of another, appear to be outcomes of the varying functional requirements of the subcultures to which these groups belong. Similarly, variations between groups in the forms and function of their respective language systems appear to reflect subcultural dictates.

In particular, higher-order logical abilities employing symbols, Standard English language forms, and verbal expression of highly-differentiated conceptual divisions appear to be less required in the sociocultural milieu to which Aborigines are exposed than in the sociocultural milieu of White Australians. Specifically, the quantitative findings of this inquiry indicate that competencies required for two-dimensional multiple classifications, identification of pictorial representations of Standard English vocabulary, conceptual groupings based on Standard English, and verbal descriptions of objects, are less needed by individuals to function adequately in the sociocultural environment of high-contact Aborigines than they are to function adequately in the sociocultural environment of

low-socioeconomic White Australians. More research is required, however, to determine whether or not more basic cognitive abilities, as in three-dimensional classifications, also are of varying functional adequacy in the sociocultural environments of both groups.

Clearly, then, questions relating to Aboriginal cognitive and language abilities are equally questions relating to Aboriginal sub-culture. Each dimension is tied to the other in a mutually reinforcing spiral⁽¹⁾ relationship. Variations in cognitive and language performance, and hence, in academic attainments, between Aboriginal and White Australians, therefore, are likely to disappear only when major subcultural differences between both groups no longer exist. As pointed out in Chapter 6, reduction of these differences will be dependent on the nature and extent of the cultural accommodations each group is forced to undergo.

But as also discussed in Chapter 6, complex assimilatory socio-cultural mechanisms appear to have a conservative influence on the nature and rate of adaptations made by groups to new circumstances. Like the egocentric interpretations of new information made by individuals, the initial response by groups to new demands tends to be 'culturocentric'. Existing sociocultural structures are brought to bear on new problems faced by the group, and are changed only when they prove inadequate for the needs they are called upon to serve. The nature and rate of culture change experienced by a given sociocultural group, therefore, appears to be determined both by the level of dissonance between its existing sociocultural structures and the demands placed upon them, and by the adequacy, as perceived by the group, of these structures (or their modifications) in meeting the demands they face.

(1) A spire, rather than a circle, portrays the interaction more accurately, as it is open-ended and allows for greater dynamism.

9.4 IMPLICATIONS FOR SOCIAL POLICY AND PRACTICE

An important task for government policy makers, educators, and others concerned with Aboriginal affairs, therefore, is to promote complementary cultural accommodations by Aboriginal and White Australians to each other, by intervening actively in the adaptive process of both groups, to diminish the intrinsic conservatism of the assimilatory response of each. In the past, as evidenced in Chapter 6, government policy makers and others have had, at best, only an incomplete understanding of the complex mechanisms guiding sociocultural and psychological change in culture contact situations generally, and in post-colonial Australian society specifically. In particular, they have failed to appreciate the dynamics of the assimilatory and accommodatory processes that appear to be governing the adaptations of Black and White Australians to each other, or of the intricate cultural and psychological (and, probably, biological) interactions at their root. As a result, policies have tended to be piecemeal or based on inadequate theoretical foundations. They have tended to reflect the workings of assimilatory and accommodatory processes rather than to promote, consciously and systematically, complementary accommodations by both groups.

Of paramount importance to any policy designed to facilitate such reciprocal cultural accommodations is the need to encourage greater participation by Aboriginal individuals and organisations in the institutional framework of mainstream society. Without a sense of participation and involvement in the wider social framework of Australian society and a feeling that the institutions which comprise it belong to them in a cultural sense, as much as they do to White Australians, Aborigines are unlikely to display social and cognitive skills commensurate with the demands of this framework.

But before Aborigines are likely to be able or willing to involve themselves more fully in mainstream life, institutional characteristics of the dominant society which actively or passively impede their participation, will need to be reduced. A loosening of White Australian attitudes regarding valued behaviour and objectives, as occurred during the late 1960s and early 1970s, for example, probably lessens the risk of their exclusion. By weakening the prohibitions on greater Aboriginal participation in mainstream society, these more tolerant attitudes may, in turn, lead to a lessening of Aboriginal inhibitions against such involvement. As noted in Chapter 6, the recent emphasis in the writings of social scientists and others on multiculturalism, rather than the Anglo-Saxon conformism of former years, represents an important step in this direction.

Pressure from professionals working with Aborigines constitutes an important means of forcing accommodations from the broader Australian society in favour of Aboriginal interests; but such adjustments are likely to be optimal only when Aborigines are in a position to influence consciously the direction of the changes and to ensure their continuance. Once established in the institutional structure of the larger society, Aboriginal self-interest groups would then be able to function as tension-inducing agents, that act continuously to counter the intrinsic conservatism of the assimilatory processes of more powerful sections of society. With appropriate skills, and motivated by self-interest, the members of such groups would be better equipped than anyone else to pressure mainstream society into making concessions in their favour. Without the tension generated by such pressure, however, fewer accommodations from the larger society would be forthcoming and the status quo probably would

be perpetuated. Aborigines would continue to be less able than most others to enjoy the advantages of contemporary Australian society, and to remain for the most part, demoralised victims of it.

Ways and means, both of encouraging the development by Aborigines of organisations to serve their own interests, and of facilitating greater Aboriginal knowledge of, and participation in, organisations at all levels of mainstream Australian society, consequently, represent important areas for future (preferably action-oriented) research. Government policies over the last decade have tended to encourage such participation; but, as in the past, their emphasis has been on 'how to make Aborigines more like us'. Equally important, however, are ways and means of modifying the broader social framework to make it both more receptive to, and more acceptable to, Aborigines.⁽¹⁾ Ultimately, such broadenings of the Australian socio-cultural and ideological framework should lead to a greater sense of communality between Aborigines and White Australians.⁽²⁾

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- (1) Examples, some of which already have been implemented, include the following: legislation which recognises traditional forms of Aboriginal land ownership and use; modifications to the legal system to enable the exercise of traditional sanctions on behaviour in tribal Aboriginal communities; special programmes directed towards providing Aborigines with skills and experience that enable them to function adequately in mainstream society; special support services in the fields of health, housing, welfare and education, when needed; systematic and thorough attempts to improve the image many White Australians have of Aborigines; greater recognition of the Aboriginal contribution to the history and development of contemporary Australian society.
- (2) This broadening accommodatory process by mainstream society is likely to be hastened by a convergence of interests between Aborigines and other more numerous poor, or 'non-Anglo', sections of Australian society.

9.5 IMPLICATIONS FOR ABORIGINAL EDUCATION

Educational institutions obviously will need to play a vital role in any such facilitatory process. But, like other organisations, they are likely to be most potent only if Aborigines are able to identify with them and their objectives, and to become more involved with them at all levels. Thus, both subtle and more overt sources of Aboriginal disaffection with the Australian education system require identification, and, where possible, elimination.

In the author's view, an active campaign is required to change the image many Aborigines have of these institutions, and of schools especially. In particular, Aborigines need to be convinced that these institutions are not simply dispensers of White Australian culture, but that their function is to serve Aboriginal children as well as others. A step in this direction, for example, would be to place greater emphasis on the role of schools and other educational institutions as centres of learning that are dependent on the accumulated knowledge of mankind generally, rather than on the knowledge of Europeans only. Greater Aboriginal participation in curriculum development, the selection of specific school texts, school administration, and teaching, should facilitate this process by aiding the identification, and hence the reduction, of ethnocentric White Australian perspectives currently guiding the choice⁽¹⁾ and content⁽²⁾ of subjects taught at schools.

(1) For example, few attempts have been made to incorporate Aboriginal knowledge of the nutritional and medicinal properties of Australian plants, or of survival in the bush.

(2) Especially of history, social science and language use. In history, for example, the contributions of Aborigines or part-Aborigines to the local histories of various areas are rarely the subject matter of inquiries, and frequently are not even acknowledged.

But, if Aborigines are to operate efficiently in mainstream institutions, they require cognitive and language skills commensurate with those of the Europeans with whom they must deal. And here lies the rub! For, as discussed previously, their existing culturalisation processes fail to induce the development of these skills (as assessed by test performance). And compensatory education programmes are likely to have only a limited effect unless the skills they are designed to foster are pertinent to the lifestyles of the individuals concerned, and hence, are reinforced by sociocultural influences outside the school.

Nevertheless, even if not complemented immediately by governmental and community intervention directed towards improving the health, housing, income, and organisational involvement of Aborigines, as occurred on the South Coast during the late 1960s and early 1970s (Chapter 6), compensatory programmes do appear warranted. Intensive and sustained practice of forms of logic and language required to compete with other sections of Australian society, and continuous exposure to the contents and contexts associated with their expression, are likely to equip Aboriginal children who experience it, more fully for mainstream institutional involvement, than it would others who do not. The findings of Brown (1978) and Lewin (1977), relating to the long-term effectiveness of pre-school programmes⁽¹⁾ for disadvantaged groups in the United States, and the preliminary findings of Ronan (forthcoming), noted in Chapter 2, concerning the long-term effects of preschool intervention for Bourke Aborigines, support this view.

(1) Important considerations when setting up pre-schools for Aboriginal children have been discussed by Nurcombe (1976) and by Twomey and de Lacey (1977).

Thus, although compensatory pre-school education programmes may not eliminate cognitive and language differences between Aborigines and Whites, they do appear to reduce these differences. In addition, by better preparing Aborigines for later participation in mainstream life, they may generate, indirectly, further reductions in these differences by facilitating changes in the culturalisation processes to which these Aborigines and perhaps their children are exposed. Such individuals also may serve as role models for other Aborigines, thereby generating a greater demand for the skills they have acquired. Nevertheless, to be maximally effective, compensatory pre-school programmes require not only co-ordination with similar programmes throughout the child's schooling, but also reinforcement by social and economic interventions of the type already noted.

9.6 FUTURE RESEARCH NEEDS

The need for continuing improvements in the type and level of education received by Aboriginal children remains large. The scope for research in the field correspondingly is great; so great, in fact, that in the author's view, there is an urgent need for government to establish an institutional body with substantial Aboriginal representation which has, as its primary functions: the identification of research needs relating to Aboriginal education; the priority-ordering, funding and co-ordination of research projects; the promotion of inter-disciplinary communication on the topic; and the dissemination of information accruing from these and other relevant investigations. In short, it should have both a progenitive and a consultative role in the transmission of ideas, research evidence, and successful educational programmes to appropriate individuals and organisations.

Questions on which this body could focus can be grouped into three broad areas: curricular needs, methods, and Aboriginal participation. What, for example, are the specific curricular needs of varying age and sociocultural groups of Aborigines? How can these needs best be served, while at the same time satisfying the curricular needs of White Australians? Specifically, what competencies best equip individuals for life, both in their sociocultural niches, and in a rapidly changing, highly technological society; and what are the components of these competencies? For example, what conceptual differentiations and generalisations are most required in modern society and in what contexts and with what other abilities are they usually expressed? How can such competencies best be fostered in a formal educational context? Should traditional Aboriginal knowledge and skills in such fields as art, mythology, bush survival or Australian ecology (especially in matters relating to the nutritional and medicinal properties, economic possibilities and conservation of native flora and fauna) be incorporated into the framework of formal schooling? If so, how, and for whom? How can ethnocentric White Australian perspectives in various subject matter best be monitored, presented, or discarded without introducing inaccurate distortions or ignoring the needs of both White and Aboriginal Australians? How can teacher-training programmes be modified to prepare student teachers more efficiently for teaching culturally different groups? How can counselling facilities for Aboriginal students be improved?

Questions relating to methods include those below. How, when, and by whom should specific forms of performance be fostered? At what age, and in what language (or dialect) should initial number and reading skills be taught? What specific techniques best promote

the development of these skills in Aboriginal children? How can the memory skills and superior visual acuity of many Aboriginal children (noted in Chapter 2), and their predisposition favouring a seeing-doing rather than a showing-telling mode of teaching, be taken advantage of in a formal educational context? How can pre-school, primary and secondary programmes best be co-ordinated with each other and with other forms of sociocultural interventions? How much should children be exposed to already-organised material, and how much should they be required to organise information for themselves? How can basic programmes best be modified to be more relevant to varying sociocultural and physical environments? What teaching strategies are most effective in enhancing the development in Aboriginal children of forms of language, logic and psychological differentiations and integrations favoured in modern society?

Questions relating to 'Aboriginal participation' focus on issues concerned with advancing Aboriginal involvement in the organisational structure of educational bodies, and with increasing their input into the decision-making processes of these bodies. How, for example, should existing organisational structures be modified to allow for a rapid increase in Aboriginal representation? Which areas of institutional involvement would enable Aborigines to exert most influence on decisions affecting them? Should new organisations, such as a separate institute of higher learning, be established to cater specifically for Aborigines (as is the case for minority groups in The People's Republic of China, for example)? What kinds of training and support schemes would best prepare Aborigines for such involvement? How can affirmative action programmes for Aborigines be implemented without provoking a 'backlash' from other sections of the society?

Theoretical issues relating to language and cognition that lie beyond the parameters of inquiry of such an organisation also remain unresolved. How important, for example, is performance to the realisation of potential? More precisely, is the expression of competence necessary for its realisation? And hence, is continuous practice a pre-requisite for the development of competence? How closely tied is the actualisation of competence, and/or its demonstration as performance, to contextual information (including the content of the task at hand)? And hence, how generalisable are various competencies to varying contexts and contents? What, if any, are the semantic or cognitive equivalents of transformational grammatical rules? What precisely is the relationship between values and abilities and how much does low self-esteem interfere with the development of competencies or their expression as performance? Which specific culturalisation processes foster which competencies?

At a more basic level, collaboration between cognitive psychologists, physiologists and biologists could lead to fresh insights into the neurological basis of cognition - the chemistry of thought. It is possible, for example, that culturally regulated patterns of stimuli are stored in the brain as coded sets of molecules, linked together through neuro-chemical messengers which enable a network of associations to be recalled or generated at any given time. If so, what are the molecular codes that constitute neurological representations of concepts? What are the principals underlying their formation and modification? How are they co-ordinated in convergent or divergent thinking to produce sudden insights, creative ideas, classificatory systems, solutions to problems, or the myriad other capabilities of thought? What are the social and educational

implications of such processes once they are identified and become subject to direct control of external agents such as injected chemicals?

Clearly many questions remain unanswered. Nevertheless, the findings and conclusions of this inquiry indicate that, if non-traditional Aborigines are to compete for positions of power or prestige on equal terms with other groups in modern Australian society, and hence, if they are to achieve a real sense of self-determination and to protect their interests adequately, they will need to develop communicative competencies, and levels and forms of psychological differentiations and integrations commensurate with those of other Australians. From pre-school onwards, therefore, they will need to experience an intensive regulated pattern of stimulations and activities that will familiarise them with the demands of the broader society and equip them to operate effectively in it. Specifically, they will need to experience extensive training in forms of logic and language that are functionally advantageous in mainstream Australian society and to be familiar with the contents and contexts usually associated with the expression of these competencies. Their motivation to acquire such competencies, however, is likely to be dependent on induced socio-cultural changes which facilitate their greater involvement in the broader society, both as individuals and as self-interest organisations.

9.7 DEFICIT OR DIFFERENCE?

Clearly, then, both the deficit and difference interpretations of Aboriginal academic failure, introduced at the beginning of this inquiry, are limited. On the one hand, as the deficit theorists argue, Aborigines require specific skills if they are to meet the demands of a

highly technological society; and the weight of evidence reviewed and gathered in this work indicates that the foundation for these skills is dependent on early childhood experiences. Thus it is unlikely that motivational or emotional impediments to the expression of existing competencies, alone, are sufficient to account for the poor academic performance of Aborigines. Culturally determined experiences that are necessary for the realisation of competencies required for scholastic success also appear to be missing from their home environments.

On the other hand, however, as pointed out by the difference theorists, Aboriginal children are unlikely to benefit greatly from educational programmes that are insensitive to their emotional needs, and indeed, they may even be harmed by them. The capacity to demonstrate competencies required for scholastic success is poor compensation for the individual who turns out to be a demoralised alcoholic. Clearly, then, educators need to be concerned not only with teaching Aboriginal children skills that are advantageous in contemporary Australian society, but also with ensuring that the self-esteem of these children is not systematically, if unwittingly, damaged by the schooling system.

The question of whether Aborigines, when compared to White Australians, experience deficits or differences with regard to their culture, cognition and language, therefore, is largely a question of balancing the emotional needs of Aborigines against the requirements of the broader society for specific skills. Ultimately, however, it is a question of values; for the answer will reflect the value system used as a basis for making judgements about specific psychological or sociocultural characteristics.

The inferior performance of White middle-class children relative to the performance of Aboriginal children on tests of visual memory (Kearins, 1976) and of eidetic imagery (Sheehan, 1976), reported in Chapter 2, for example, rarely has been attributed to the 'inferior' social or cultural background of White children. Hence, the absence of experiences in the home environments of Aboriginal children that are thought to engender specific cognitive or communicative competencies does not in itself imply Aboriginal cultural 'inferiority'. Similarly, the limited range of situations, noted by Cole and Bruner (1971), to which minority groups may be able to apply their competencies, may mean that such groups are pragmatically disadvantaged at many levels of involvement in Australian society, as de Lacey (1980) suggests. But it is equally true that the highly-differentiated, elaborated-code speaker is likely to be pragmatically disadvantaged in many situations with which minority group members are familiar. Terms such as 'deficit', 'retarded', or 'deficient', that reflect a middle-class bias and confer negative qualities on other groups, therefore, should be avoided, or at least, heavily qualified. Their use merely burdens Aboriginal children with the label of inferiority.

Nevertheless, differences in stress placed on the development of particular competencies between various groups cannot be dismissed, and the disadvantages experienced by Aborigines in contemporary Australian society should not be ignored. The cultural disorganisation, insecurity, dependence, alienation and psychological stress experienced by many contemporary Aborigines, for example, contrasts sharply with the secure identity, economic autonomy, social cohesion and sense of oneness with the universal order that characterised their ancestors.

And although the subcultures they have evolved and the competencies fostered therein are adaptive in a functional sense, in that they provide Aborigines with a way of life and skills to match that enable them to cope to varying degrees on the fringes of the broader society, they do not enable Aborigines to enjoy the benefits of fuller participation in mainstream society; nor do they provide them with the 'know-how' and skills necessary to protect their interests adequately against encroachment by others.

Thus the question of deficit or difference is also one of social, economic and political power. So long as Australia's economic system and power élite continue to reinforce each other, the basic structure of Australian society is unlikely to change. Accommodations by mainstream society to the presence of Aboriginal Australians (who comprise only about one percent of the total population), therefore, are likely to occur only so long as the vested interests of powerful sections of Australian society are not seriously threatened. Aborigines do not have the same luxury, and will not, at least until their own power base or alliances have expanded. Indeed, the strength and utility of accommodations made by both groups over the past decade and a half are likely to be tested severely by the latest oscillation towards a more conservative assimilatory response by mainstream society in Australia (and other 'Western' nations), that has occurred as the 1970s have been replaced by the 1980s.

The argument put here, then, is not that contemporary White Australian lifestyles, and especially those of the middle class, are in any way superior to others in their potential to provide human beings with a sense of fulfilment or a 'joie de vivre'. Indeed, the high incidence of boredom, stress, depression, alienation, loneliness, lack

of trust, and loss of a sense of meaning among White Australians indicates that, for many, it may be less so. Rather, it is an assertion that the immense power of vested interests in maintaining a capitalistic economic system, as expressed primarily in the ideology, organisations, skills and preoccupation of the middle class is a reality of contemporary Australian society with which Aborigines, like other groups (such as the working class) must cope. Until Aborigines come to feel that their own interests also are served by this system, and until they acquire the knowledge, skills and motivations to protect these interests, their coping strategies are likely to remain those of victims of the system, caught in a cycle of poverty, alienation, poor health and demoralisation.

The values, preoccupations and power of the working class (especially as manifest in labour unions) also are realities with which Aborigines, like the middle class, must cope. Indeed, it is probable that most Aborigines have greater contact with members of the working class than with members of the middle class. But so long as the means of production remain under the control of the middle class, most important institutions in contemporary Australian society, and especially schools, are likely to reflect the outlook of this group; and regardless of the power hierarchy in a highly technological society, the nature of the skills required to sustain such a society will be the same, and hence, the need for Aborigines to acquire them will remain. Nevertheless, the interactions between Aborigines and the labour movement represents an important area for future research.⁽¹⁾

(1) For recent research in this area, see Curthoys and Markus (1978).

The question arises, however, as to whether or not the induced institutional integration of Aborigines advocated in this inquiry is simply a means of robbing them of all but their genetic distinctiveness. Will it, in practice, simply pressure Aborigines into becoming black equivalents of White Australians?

In several respects the answer, probably, is 'yes'. The acquisition of knowledge, skills, values, aspirations and behaviour patterns that would enable Aborigines to participate more effectively in decision making concerning their future, and to compete on a more equal basis with other Australians inevitably means they will become, in a sense, more 'Western'. But in the author's view, it is only by incorporating, selectively, elements of White Australian culture into their own, and sharing some community of identity with White Australians that Aborigines, ultimately, will be in a position to reaffirm their distinctiveness and to ensure a greater sense of self-determination. As already discussed, however, the social ideology and framework of mainstream Australian society will need to broaden by becoming less 'Europocentric' and more reflective of its multicultural make-up, if the accommodatory process by Aborigines is to be successful. Hence, White Australians also will need to undergo changes.

In the author's view, therefore, there is a need to transcend the conceptual constraints of the deficit versus difference controversy, and to focus instead on more substantive issues relating to the nature of individual and group adaptations in culture-contact situations. The heuristic device so common in Western thought of presenting issues in terms of antagonistic stereotypes, though useful in many instances, is

often contrived and can lead to distortions. By imposing an artificial dialectic on discussions of Aboriginal education, the above controversy, for example, leaves insufficient scope for a more comprehensive understanding of the dynamics of sociocultural and psychological change. It tends to 'fossilise' the psycho-social characteristics of groups as though they were discrete and static, and hence, functions rather like a set of 'conceptual blinkers' that blinds investigators to the constant processes of adaptation, interaction and change these characteristics undergo in culture-contact situations. The deficit versus difference controversy, therefore, is, in the author's view, an artefact of an inadequate conceptual approach to the understanding of issues relating to the education of minority groups.

A more productive approach to these matters, suggested by the findings of this inquiry, is one which focuses on the nature of the psycho-social adaptive processes of (both the majority and minority) groups in culture contact situations. By enabling more comprehensive understandings of the principles governing these processes, such an approach would shed light on the nature of the adaptational options available to Aborigines, and hence, on the likely functional outcomes of particular social and educational policies and programmes. With these insights, guidelines directing future policies and programmes would have firmer theoretical foundations.

Questions of greater substance than whether Aborigines experience deficits or differences when compared to White Australians, therefore, include the following: What, more precisely, is the nature of the processes governing sociocultural assimilations and accommodations, and how closely tied are these processes to the psychological

assimilations and accommodations of individuals? Assuming that the assimilatory needs of groups and individuals limit their adaptiveness, what sociocultural accommodations are realistically attainable for any generation? What are the limitations of human adaptiveness in culture-contact situations? What adaptational options are possible for varying groups of Aborigines, and what are their implications for social policy and practice? What accommodations in favour of Aborigines are likely to be elicited from more powerful sections of Australian society, and how can these accommodations best be facilitated? How quickly, and how closely, can the accommodations of Black and White Australians be made to dovetail such that the interests of both groups are served?

The need to extend the work of this inquiry through co-ordinated and sustained interdisciplinary efforts, directed towards exploring some of these issues, and in particular, towards identifying means by which complementary accommodatory processes between Aborigines and Whites may be expedited as part of a concerted programme directed towards improving Aboriginal prestige and power in contemporary Australian society is urgent, especially in the field of formal education.

APPENDICES

APPENDIX A CULTURE OF POVERTY TRAITS
AS DESCRIBED BY OSCAR LEWIS

	1961	1965/ 1968	1966
A RELATIONSHIP TO THE DOMINANT SOCIETY			
1 (a) Only partially integrated into national institutions	X		
(b) Lack of effective participation/ integration into major institutions		X	
(c) Disengagement and non-integration with respect to major institutions			X
2 Marginal, even in the heart of a great city	X		
3 Low level of education and literacy	X	X	
4 Do not belong to labour unions, political parties	X	X	
5 Non-participation in social welfare systems; medical care, maternity, old age, and so on (Also see A27, A28)	X	X	
6 Make little use of city's banks, hospitals, department stores, museums, (airports (α)) (art galleries (β)).	X	X	X
7 Constant struggle for survival	X		
8 Produce little wealth and receive little in return		X	X
9 High rates of unemployment and underemployment (Contrast with B4(a))	X	X	X
10 Low wages	X	X	X
11 Miscellany of unskilled occupations	X	X	X
12 (a) Absence of savings	X		
(b) Lack of economic resources		X	
(c) Poverty			X
13 Chronic shortage of cash	X	X	X
14 (a) Absence of food reserves in the home	X	X	X
(b) Pattern of buying food many times daily, as the need arises	X	X	
15 Use of secondhand clothing and furniture	X	X	X

	1961	1965/ 1968	1966
16 Lack of property ownership		X	X
17 (a) Pawning	X		
(b) High incidence of pawning personal goods		X	X
18 Borrowing from local money-lenders at usurious rates of interest	X	X	X
19 (a) Local solutions to problems not met by institutions and agencies of the dominant society	X		
(b) Development of alternative institutions (and procedures (γ))		X	X
20 (a) No bank, therefore informal credit devices	X		
(b) Spontaneous, informal credit devices organised by neighbours		X	X
21 No doctors, suspicious of hospitals, therefore reliance on herbs, home remedies, curers and midwives	X		
22 (a) Critical of priests, rarely go to confession and mass, relying instead on prayer to images at home or pilgrimages to popular shrines	X		
(b) Cynicism, which extends even to Church	X	X	X
23 (a) Counter quality - potential for use by political movements against the existing political order - this may vary nationally	X	X	
(b) Potential for protest			X
24 Critical of (hostile to (γ)) some institutions (and values (α)) of the dominant class	X	X	X
25 Hatred of police	X	X	X
26 Mistrust of government and those in high positions	X	X	X
27 Segregation, discrimination, fear, suspicion, apathy		X	X
28 Involved with gaols, welfare agencies, army (See A4)		X	X

	1961	1965/ 1968	1966
29 Their involvement with the relief system perpetuates poverty and a sense of helplessness (See A4)		X	
30 Aware of middle-class values, sometimes claim them, but rarely live by them		X	X
31 Many say formal marriage is preferable, but most participate in consensual unions		X	X
32 Residual quality - attempts to utilise and integrate into a workable way of life the remnants of beliefs and customs of diverse origins	X		

B NATURE OF SLUM COMMUNITY

1 Higher death rate than general population	X		
2 Lower life expectancy	X		
3 A higher proportion of individuals in younger age groups	X		
4 (a) High incidence of child labour and working women - therefore higher proportion gainfully employed (See A8)	X		
(b) Child labour		X	
5 Poor housing conditions		X	X
6 Live in crowded quarters/housing	X	X	X
7 Lack of privacy (1965/1968, 1966 versions placed this under 'Family')	X	(X)	(X)
8 Gregariousness	X	X	
9 High incidence of alcoholism	X		
10 Frequently resort to violence when settling arguments	X		
11 Frequently use physical violence when training children	X		
12 Wife beating	X		

	1961	1965/ 1968	1966
13 (a) Low level of organisation gives the poor community its marginal quality		X	X
(b) Minimal organisation beyond nuclear/extended family			
14 Occasional informal grouping and voluntary associations (Similar to A19)		X	X
15 (a) Esprit de corps - sense of community		X	X
(b) Sense of territoriality			
16 Lack of wealth (Similar to A11)		X	X

C THE FAMILY

1 Absence of childhood as protected phase (Similar to B4)		X	X
2 Sibling rivalry for maternal affection and limited goods		X	X
3 Early initiation into sex	X	X	X
4 Free unions, consensual marriages (See A30)	X	X	X
5 (a) High incidence of abandonment of mothers/children by men	X	X	X
(b) Instability			X
6 Trend towards mother-centred families	X	X	X
7 Predominance of nuclear family	X		
8 (a) Greater knowledge of maternal relatives	X	X	
(b) Closer to maternal relatives			X
9 Strong disposition to authoritarianism (of female head (γ))	X	X	(X)
10 Great (verbal (γ)) emphasis on family solidarity - ideal rarely achieved (because of C2)	X	X	(X)

D THE INDIVIDUAL

	1961	1965/ 1968	1966
1 (a) Provincially and locally oriented	X		
(b) Know only of local conditions, neighbourhood and way of life		X	X
2 Little sense of history	X	X	X
3 Do not have the knowledge, vision or ideology to see similarities with their counterparts elsewhere	X	X	X
4 Not class conscious	X	X	X
5 But sensitive to status distinctions	X	X	X
6 Widespread belief in male superiority (crystallised in machismo - the cult of masculinity (δ)) (Contrast with D12)	X	X	X
7 Martyr complex among women (Contrast with D12)	X		
8 High tolerance of psychopathology of all sorts	X	X	X
9 Maternal deprivation		X	X
10 Orality		X	X
11 Weak ego structure		X	X
12 Confusion of sexual identification (See D6, D7)		X	X
13 Strong feelings of marginality, helplessness, dependency	X	X	X
14 (a) Feelings of interiority	X	X	X
(b) Poor self-esteem and low self-respect. Minority rights movements may do more to improve these than would economic gains alone.			X
15 (a) Sense of resignation/fatalism (based upon realities of difficult life situation (α))	X	X	X
(b) Low level of aspiration/fatalism - depends on national context		X	

	1961	1965/ 1968	1966
15 (c) Low level of aspiration reduces frustration		X	X
16 Strong present-time orientation	X	X	X
17 Little ability to defer gratification or plan for the future	X	X	X
18 Lack of impulse control		X	
19 Present-time orientation has positive dimension which involve a sense of:			
(a) spontaneity and adventure		X	
(b) enjoyment of the sensual		X	
(c) indulgence of impulse		X	
20 Legitimation of hedonism facilitates spontaneity and enjoyment		X	
21 Less driven and anxious than striving middle class			X
22 Frequent use of violence leads to:			
(a) outlet for hostility		X	
(b) little repression		X	
23 Also much pathos, suffering and emptiness		X	X
24 Little support or long-range satisfaction		X	X
25 Mistrust magnifies helplessness/isolation		X	X

Key:

- (α) 1961 only
- (β) 1961 and 1965/68 only
- (γ) 1966 only
- (δ) 1961 and 1966 only

APPENDIX B CULTURE OF POVERTY TRAITS: RE-ORGANISED,
CONDENSED SUMMARY

A MARGINALITY

- (1) Minimal involvement with major institutions,
including the following:

- (a) educational (low levels of schooling)
- (b) political parties
- (c) labour unions
- (d) financial (banks, etc.)
- (e) cultural facilities (museums, galleries, etc.)

Exceptions include the army, gaols and social security
system. (1)

- (2) Counter quality - (segregation, discrimination, fear,
suspicion, apathy):

- (a) hostility to major institutions (believe their
needs are not served by them)
- (b) critical of values of dominant class (rarely
live by them, though may claim to)
- (c) mistrust of government and those in high positions
- (d) in Latin America, cynicism extends to the established
Church (make little use of Church facilities/practices)
- (e) suspicious of hospitals - few doctors
- (f) potential for protest against existing order

- (3) Lack of organisation:

- (a) minimal organisation beyond the extended family
- (b) nevertheless, informal temporary groupings do occur
- (c) attempts also are made to provide local solutions to
problems: e.g. neighbourhood credit devices, alter-
native health measures (home remedies, cures,
midwives), alternative religious practices (images,
pilgrimages)

(1) Lewis is somewhat ambiguous as regards involvement in social
security systems. But the general theme of his argument
appears to be that, where these systems are poorly developed,
they do little to overcome the culture of poverty.

(4) Residual quality:

Attempted integration and utilisation of customs and beliefs of differing origins

B LACK OF WEALTH

(1) Employment:

- (a) high incidence of unemployment and underemployment (counteracted partially by high incidence of child labour and working women)
- (b) most unskilled
- (c) low wages

(2) Budgeting:

- (a) chronic shortage of cash/savings/economic resources
- (b) absence of food reserves (pattern of buying several times a day)
- (c) high incidence of borrowing from local moneylenders at usurious rates of interest
- (d) high incidence of pawning goods

(3) Possessions:

- (a) no property
- (b) secondhand clothing, furniture

(4) Housing:

- (a) poor
- (b) overcrowded, lack of privacy

C DEMOGRAPHY

- (1) Young
- (2) Low life expectancy

D FAMILY

- (1) Unstable consensual unions
- (2) Many mother-centred (abandonment by men)
- (3) Children closer to maternal relatives
- (4) Authoritarianism of female head

- (5) Personal violence common (child rearing, settling disputes)
- (6) Family solidarity - ideal rarely achieved
- (7) Sibling rivalry for limited goods/affection
- (8) Childhood not protected
- (9) Early initiation into sexual activity.

E INDIVIDUAL

- (1) Maternal deprivation:
 - (a) orality
 - (b) weak ego structure
 - (c) confusion of sexual identity (but men - emphasis on machismo/male superiority; women - martyr complex)
- (2) Present time orientation:
 - (a) little ability to defer gratification or plan for the future
 - (b) weak impulse control/indulgence of impulse
 - (c) enjoyment of sensual/legitimation of hedonism
 - (d) spontaneity, adventure, gregariousness
 - (e) but little support or long-range satisfaction
- (3) Sense of alienation, fatalism and inferiority:
 - (a) feelings of marginality, not belonging, alienation
 - (b) sense of fatalism, resignation, powerlessness, dependency in response to difficult life circumstances
 - (c) mistrust magnifies sense of helplessness and isolation
 - (d) feelings of inferiority, personal unworthiness
 - (e) but poor self-image, self-respect ameliorated by Civil Rights Movement
 - (f) low level of aspiration (may vary with national context)
 - (g) low level of aspiration reduces frustration
 - (h) less driven and anxious than the middle class

- (4) Much pathos, suffering, emptiness:
 - (a) alcoholism
 - (b) personal violence (outlet for hostility, little repression)
 - (c) high tolerance for psychopathology of all sorts
- (5) Provincial/Local orientation:
 - (a) know only of local conditions, neighbourhood and way of life
 - (b) little sense of history
 - (c) absence of knowledge/visual ideology to see similarities with counterparts elsewhere
 - (d) not class conscious, but sensitive to status distinction.

APPENDIX C SEMI-STRUCTURED INTERVIEW OUTLINE
FOR PARENTS (INCLUDING CPS)

SOUTH COAST SURVEY - QUESTIONNAIRE

NAME: AGE:
ADDRESS: SEX: M.
..... F.

A Personal History:

How long have you and your family
lived in this house?
Where did you all live before then?
Where were you all living 5 years ago?
Where were you all living 10 years ago?
Where were you born?
Where was your husband(wife) born?

B Housing:

(The first three items are to be
answered by the interviewer)

Where is the house situated?	In town	()
	Out of town	()
Condition of house	Good ()	Poor ()
Construction material of house	Fibro	()
	Weatherboard	()
	Brick	()
	Other	()
Do you own the house? Are you paying it off? Or are you renting it?	Owned (or paying off)	()
	Rented	()
What is your weekly rent (or monthly house repayment)?	
How many bedrooms are there in the house?	
How many other rooms are there?	
How many people share this house with you?	(a) no.of adults	()
	(b) no.of children	()

C Family:

Who is the household head?

What relationships do other people in the house have to the household head?

Spouse Yes () No ()
Number

Children ()

Parents ()

Other relatives ()

Friends ()

Is the family nuclear or extended?

Nuclear ()

(To be answered by the interviewer)

Extended ()

Who does (name of child tested) see most often - his/her relatives on his/her mother's side of the family, or those on his/her father's side of the family?

Father's ()

Mother's ()

D Employment and Income:

How many members of your family living with you are currently employed full-time?

()

How many are employed part-time?

()

What kind of job does each have, and how long have they had it?

Person	Occpn.	Duratn.
1
2
3
4
other

What previous job has each held?

Person	Occupation(s)
1
2
3
4
other

How many members of your family are receiving unemployment benefits?

()

What kind of work did each do previously?

<u>Person</u>	<u>Type of Work</u>
1
2
3
4
other

What other forms of government assistance do you or any member of your family receive?

<u>Person</u>	<u>Assistance</u>
1
2
3
4
other

What other source(s) of income (if any) does each member of your family have?

<u>Person</u>	<u>Source</u>
1
2
3
4
other

E Possessions:

Do you, or any other member of your family, own land?

Yes () No ()

Does anyone in your family own a car?

Yes () No ()

Or a television set?

Yes () No ()

Was most of the furniture in the house new or secondhand when you bought it?

New () Not new ()

Is the loungeroom carpeted?
(Asked only when loungeroom was not visible to the interviewer)

Yes () No ()

F Budgeting:

Do you (or your spouse) buy food in small quantities as the need arises (e.g. daily), or in large quantities (e.g. to last a week or more)?

Small () Large ()

Are you or your spouse able to save very much these days?

Yes () No ()

Do you both find that you have frequent difficulty meeting expenses?

Yes () No ()

G Membership of Organisations:

Is anyone in your family a member of a trade union?

Yes () No ()

Is anyone in your family a member of a political party?

Yes () No ()

Does any family member belong to a sporting or social club?

Yes () No ()

Does anyone belong to any other organisation?

Yes () No ()

If 'yes', which one?

.....
.....
.....

H Involvement with Major Institutions:

Can you tell me the name of the current Mayor (Shire President)?

Yes () No ()

Did you or your spouse vote in the last local government elections?

Yes () No ()

Do you or your spouse have a bank account?

Yes () No ()

Are members of your family insured through a private medical health insurance agency?

Yes () No ()

I Government Agencies:

Has anyone in your family ever been in trouble with the police, for other than a traffic offence?

Yes () No ()

Has any family member had contact with a social worker during the past year?

Yes () No ()

Have you or anyone else in your family been in touch with a community health worker?

Yes () No ()

Or any other government officer (e.g. employment, education)?

Yes () No ()

If 'yes', why?

.....
.....
.....

J Education:

At what age did you leave school?

How old was your spouse when he/she left school?

What was the highest grade that you attained?

And your spouse ... What grade did he/she attain?

What grades are each of your children in at present? Child 1:

Child 2:

Child 3:

Child 4:

Others:

.....

Do you or your spouse regularly attend P & C meetings? Yes () No ()

Have you or your spouse met your child's (children's) classroom teacher(s)? Yes () No ()

All parental interviews included these questions. They were supplemented, however (especially in the case of the Aboriginal respondents), by other questions or conversation that varied according to the circumstances. As well as exploring in greater detail some of the topics already listed, these supplementary questions focused on such topics as: aspirations and expectations for children; current attitudes towards government authorities (especially the schools and the police); Aboriginal-White relations generally; child-rearing patterns (e.g. should parents be strict when bringing up children?); sense of identity; and recent lifestyle changes.

The information obtained was recorded (in written form or vocally on a tape) immediately following the interview. Although some minor information inevitably was lost, this procedure was found to be convenient, often necessary, and very efficient for recording most of the information.

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- Interview 4.5 Ex-social worker for Bega Valley Aboriginal Advancement Association. (Bermagui, October 1976)
- _____ 4.6 Ex-social worker for Bega Valley Aboriginal Advancement Association. (Bermagui, August 1976)
- _____ 6.3 Bega Aboriginal community leader. (Bega, October 1976)
- _____ 7.2 Aboriginal resident of Bermagui. (Bermagui, August 1974)
- _____ 7.3 Aboriginal father (ex-resident of Wallaga Lake) (Bermagui, October 1974)
- _____ 11.1 Commonwealth Employment Service Officer. (Bega, August 1974)
- _____ 12.1 Older Aboriginal female resident of Bega. (Bega, August 1974)
- _____ 17.1 White male primary school teacher who has lived and worked with South-coast Aborigines since childhood. (Moruya, August 1974)
- _____ 21.1 Bega District Police Inspector. (Bega, October 1974)
- _____ 31.2 Social worker for New South Wales Department of Youth and Community Affairs. (Bega, October 1976)
- _____ 66.1 Aboriginal resident of Wallaga Lake Reserve and executive member of its Management Association. (Wallaga Lake, October 1976)
- _____ 66.2 Aboriginal resident of Wallaga Lake Reserve and executive member of its Management Association. (Wallaga Lake, October 1976)
- _____ 67.2 Aboriginal mother and resident of Wallaga Lake Reserve. (Wallaga Lake, October 1976)
- _____ 67.3 Aboriginal mother and resident of Wallaga Lake Reserve. (Wallaga Lake, November 1976)
- _____ 68.3 Aboriginal counsellor for an Aboriginal alcoholic rehabilitation group. (Wallaga Lake, October 1976)
- _____ 69.1 Male Aboriginal resident of Wallaga Lake Reserve. (Wallaga Lake, October 1976)
- _____ 71.1 Aboriginal father and resident of Eden. (Eden, November 1976)
- _____ 73.1 Aboriginal mother and resident of Eden. (Eden, November 1976)
- _____ 74.1 Grandfather of Aboriginal children and resident of Eden. (Eden, November 1976)

- Interview 76.1 Aboriginal mother and resident of Eden. (Eden, October 1976)
- _____ 78.1 Aboriginal father and resident of Eden. (Eden, August 1976)
- _____ 81.1 Aboriginal mother and resident of Bega. (Bega, September, 1976)
- 86.2 Aboriginal social worker for Bega Valley Aboriginal Advancement Association. (Bega, September 1976)
- 87.1 Aboriginal tree feller. (Kiah, August 1976)
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